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ABSTRACT

Text, illustrations, and exercises are utilized in this set of learning modules to instruct the general public in the prevention and treatment of heart disease. The first module, by James W. Woods, presents a medical definition of high blood pressure, reviews its causes and effects, and discusses its treatment. A script to a slide version of this module is also included. The second module, by Patricia A. Tabloski, provides a means of assessing risk of heart disease in light of identified physical and emotional risk factors that are associated with poor coronary health. The third module, by Lucille N. Paradela, describes how to accurately measure a radial (wrist) pulse and discusses the need for patients taking Digitalis or wearing a pacemaker to keep a daily record of their pulse rate. The fourth module, by Erna Olsen, discusses the physical and emotional factors in a person's life that increase the chances of heart attack. The fifth module was prepared by Gayle Lacivita and Suzanne Burge for patients about to undergo cardiac catheterization to explain the procedure and what to expect. The sixth module, by Karen S. Ehrat, describes the operation and function of asynchronous implanted pacemakers. The seventh module, by Nelda A. Samarel, discusses the effects of Digoxin, its daily dosage, and possible side effects. The modules intersperse the text with reinforcement exercises with immediate feedback and conclude with post-tests and answer keys. (JP)

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HEALTH INSTRUCTION PACKAGES:

CONSUMER -- YOUR HEART AND BLOOD PRESSURE

Modules prepared by:

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HEALTH INSTRUCTION EXCHANGE

A Project of the League for Innovation in the Community College

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A PROJECT OF THE LEAGUE FOR INNOVATION IN THE COMMUNITY COLLEGE

HIGH BLOOD PRESSURE

by

James W. Woods, M.D.

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TITLE OF PACKAGE:	High Blood Pressure
AUTHOR:	James W. Woods, M.D.
INSTITUTION:	University of North Carolina, Chapel Hill, N.C.
INTENDED STUDENTS:	Public
ESTIMATED WORKING TIME:	20 minutes
MATERIALS NEEDED:	None
REVISED:	March 15, 1978

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We doctors and nurses who operate the high blood pressure (hypertension) clinic are eager to give you the best possible medical care. We can do this only if you understand your health problem and actively do your part to help. Your knowledge of the disease can benefit not only you but also friends or family who have high blood pressure.

Let us go over the questions which patients most often ask and discuss the answers.

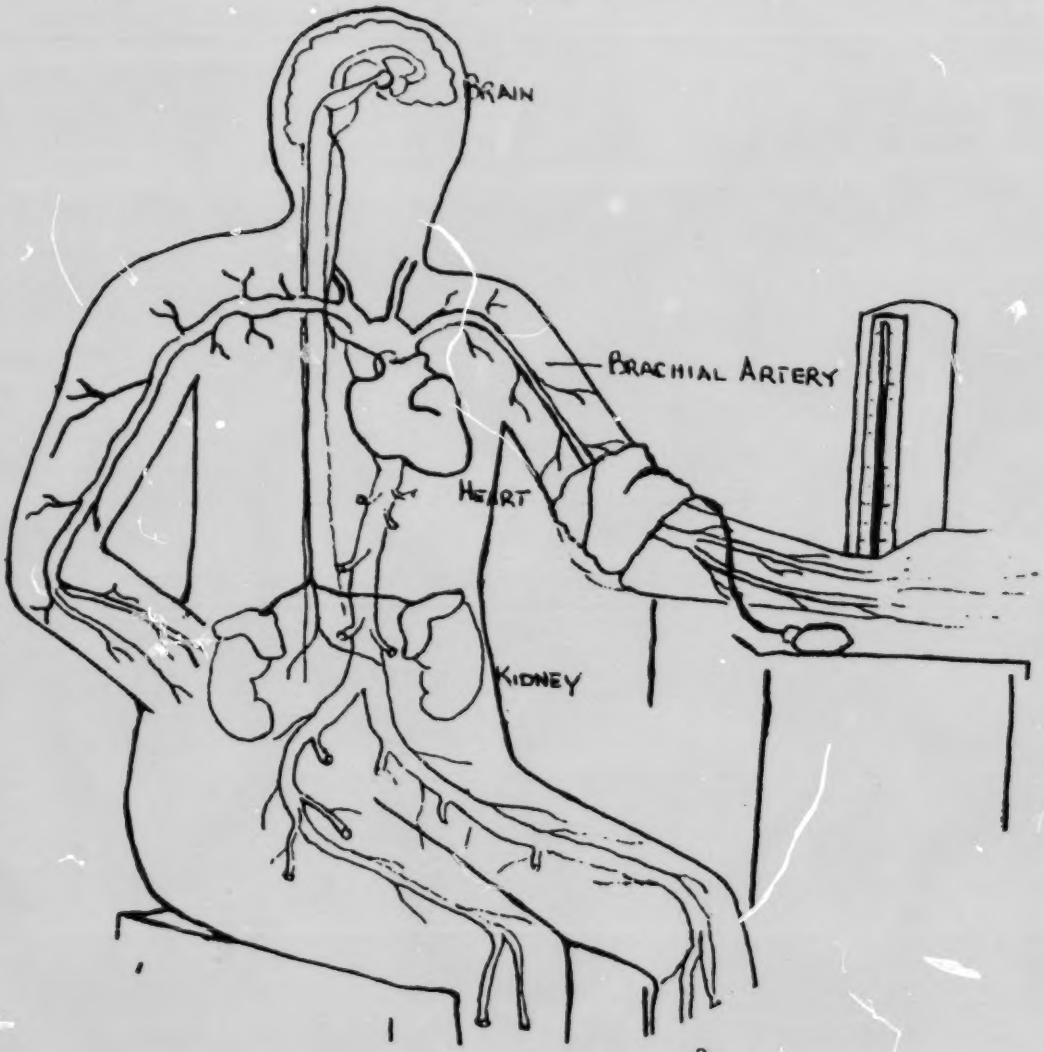
I. WHAT IS HIGH BLOOD PRESSURE OR HYPERTENSION?

Everyone has blood flowing through the arteries under pressure. This pressure does not remain the same, but rises with excitement or anger and falls with rest or sleep. These changes are perfectly normal. It is only when the pressure goes higher than normal and stays that way that it can cause trouble.

Now look at the drawing below as you read this. When your blood pressure is taken, the force of the blood against the artery walls is being measured. This force is produced by your heart (pump), as it beats. Artery walls are elastic and muscular. They stretch each time the heart pumps blood into them and the pressure goes <u>up</u> (systolic pressure, range - 120-250). The arteries contract when the heart relaxes and the pressure goes down (diastolic pressure, usual range -70-140). This happens 60-80 times per minute. Blood pressure is written like this:

$\frac{130}{80}$ = systolic pressure
= diastolic pressure

This example is read, "One-thirty over eighty."



Is the above clear? answer the questions below, check Yes or No.

1. Blood pressure measurement refers to blood flow in arteries.
   Yes _____ No _____

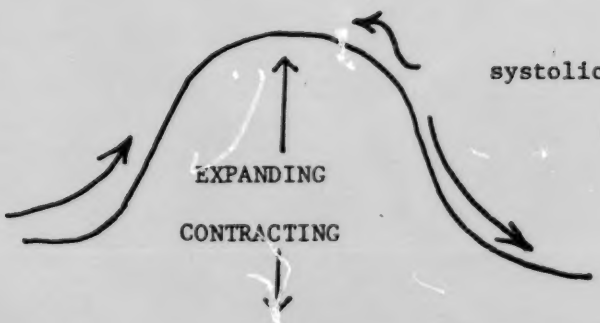
IN THE EXAMPLE ON PAGE 2:

2. Is 130 the Systolic pressure? Yes _____ No _____
3. Is 80 the Diastolic pressure? Yes _____ No _____

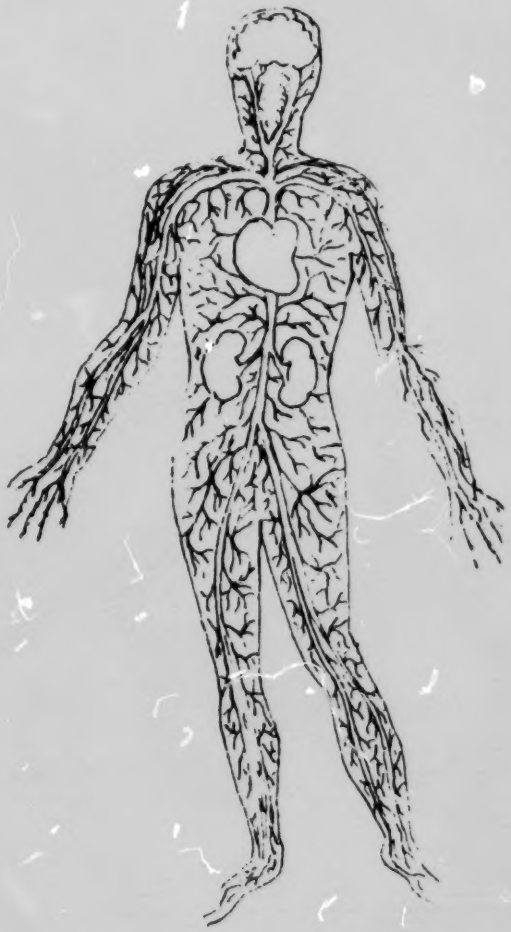
If your answers to 1, 2, and 3 were Yes, you are correct.

It will be helpful here for you to feel the radial artery in your wrist, as is shown in the picture. Use your first and second fingers to do this.

You can feel the artery expand as the pressure goes up, and relax as it comes down.



Think of the arterial system as a tree with smaller and smaller twigs branching off from the limbs. You can imagine a tree from the sketch, perhaps. The smallest twigs of the arterial system help to control your blood pressure by contracting or relaxing - by making it easy or hard for the blood to pass through. When they clamp or squeeze down (much as tightening the nozzle on a garden hose) the pressure goes up in the larger arteries and the heart must work harder to force the blood through.



When the heart has to pump against increased resistance for a long time, it thickens and enlarges. If the resistance and pressure are not lowered, it may eventually fail.

What is normal blood pressure then? It is up to 140/90 in adults (lower in children).

Now, an example of a pressure you would consider moderately elevated is 180/100. An example of one that you would consider very high is 230/130. Below 140/90 is normal for an adult.

Now you might ask, what is <u>low</u> blood pressure? This is usually a fine thing - since it places less strain on the heart and arteries. Only rarely is it a sign of a disorder that needs treatment.

II. WHAT CAUSES HYPERTENSION (HIGH BLOOD PRESSURE)?

We can't give you an easy answer. In 9 out of 10 patients, the cause is unknown (called essential hypertension). The small arteries are clamped down but why is not yet known (research will answer this in the future, we think).

Inheritance plays a part since hypertension often runs in families.

Emotions probably play a part. It is quite possible that persons who react to even mild life stresses with large rises of blood pressure will eventually develop a permanent elevation.

Salt is probably important. Almost all of us eat more than we need. A low salt diet or a diuretic ("water pill") lowers pressure in most people.

Finally, in 1 out of 10 patients a cause of the hypertension can be found and removed. This may be a small tumor pouring out a chemical into the blood or it may be disease of a kidney, or an obstruction in a blood vessel.

It is because some patients have a curable cause for the hypertension and because doctors need to know how well the patient is tolerating the high blood pressure that physical and laboratory examination are necessary.

Did we make this clear? Try answering these questions.

4) In how many patients can a cause for hypertension be found and removed? 1 out of 10 _____ 3 out of 10 _____ 9 out of 10 _____

5) Check two factors thought to play a part in causing essential hypertension.

_____ inheritance _____ emotion _____ exercise

_____ laziness _____ salt _____ milk

If you checked 1 out of 10 for Question #4 and checked inheritance, emotion, or salt for Question #5, you are correct.

III. WHAT TROUBLE CAN HYPERTENSION CAUSE

First, patients with mild hypertension may live for many years without bad effects. Secondly, patients who faithfully follow their treatment and have their pressure controlled at normal or near normal levels may live comfortably and usually avoid the bad effects of high blood pressure.

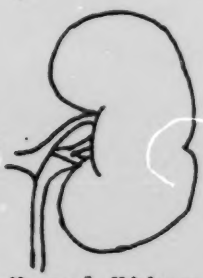
But those with severe or uncontrolled blood pressure may have injury to heart, the brain, the lungs, blood vessels, or the kidneys.

The heart may enlarge and fail.

Normal Heart

Enlarged and
Failing Heart

The kidneys may be damaged and fail.

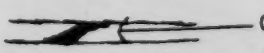


Normal Kidney

Kidney damaged
by hypertension

Hypertension puts strain on the arteries and speeds up hardening of the arteries. The artery may rupture or develop a clot (stroke).

Rupture

 Clot

The brain and lungs are also subject to damage.

6. Check four organs most often damaged by uncontrolled high blood pressure:

_____ a) brain _____ d) stomach

_____ b) lungs _____ e) kidneys

_____ c) heart

If you checked a), b), c), and e) you are correct.

The symptoms of hypertension then are largely a result of damage to organs of the body.

This is certainly frightening but these complications need not occur in most patients if blood pressure is controlled - and it can be controlled with a team effort by you, the doctor, the nurse, and your family.

IV. WHAT CAN THE DOCTOR DO

He can carry out a careful examination (including laboratory tests) in order to search for a curable cause and to judge the state of your blood vessels, heart, kidneys, etc.

He will advise you to eat less salt (a dietician can help you with this), to lose weight if you are overweight, and to reduce or stop smoking. Overweight and cigarette smoking increase the chances of blood vessel and heart injury.

Finally, he can choose from a number of drugs, the drug or drugs which will best control your pressure. Even better drugs will become available as a result of research.

7. Check correct ways that diagnostic examination and tests help the doctor.

_____ a) Help him search for a cure.

_____ b) Help him give more accurate advice.

_____ c) Help him decide what drug is best for you.

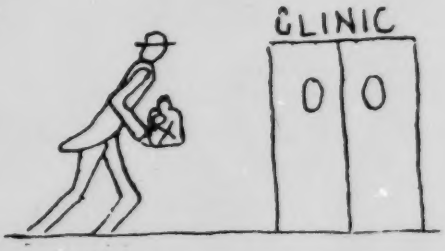
If you checked a) b) and c), you are correct.

V. WHAT CAN YOU DO

Make a habit of following your diet and taking your medicine <u>every day</u>.

Keep your clinic or office appointments faithfully.

Bring your medicine to each clinic visit in order that there may be no question of what you are taking.



(4) Honestly and freely <u>tell</u> the doctor or nurse what <u>your problems are</u>:

Money	Sex life
Family problems	Symptoms
Transportation	Discouragement

Finally, <u>remember</u>, you are <u>not alone</u>. 21 <u>million</u> people in the U.S. have high blood pressure. Your high blood pressure can be controlled. You can lead a useful and long life.

8. High blood pressure can be controlled.

Yes _____ No _____

You answer is yes, of course

POST-TEST

Check the appropriate answer to each question.

(1) High blood pressure is due to increased resistance to blood flow in:

_____a. arteries _____b. veins

(2) The cause of high blood pressure is known in:

_____a. most patients _____b. minority of patients

(3) The organs which are most often damaged by uncontrolled high blood pressure are:

_____a. brain
_____b. lungs
_____c. heart
_____d. stomach
_____e. kidneys

(4) Diagnostic examination and tests before treatment help the doctor in which of these ways. (May be more than one correct answer).

_____a. He can search for a cure.
_____b. He can give more accurate advice.
_____c. He can decide what drug is best for you.

(5) My treatment at present includes: (Check if advised)

_____Low salt diet
_____Weight reduction
_____Giving up cigarettes
_____Drugs (write which)
_____Other

(6) If my doctor does his part and I do my part, it has been proven that the result will:

_____a. make no difference
_____b. give me an excellent chance of living a longer and healthier life.

(7) Which statement(s) best describe your feeling about this booklet?

_____Difficult
_____Too long
_____O.K.
_____Confusing
_____Helpful
_____Frightening

---

1. (a) arteries
2. (b) minority
3. (a) brain, (b) lungs, (c) heart, and (e) kidneys
4. Any of the 3 choices
5. Personal treatment
6. (b) give me a chance

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HIGH BLOOD PRESSURE

By

James W. Woods, M.D.

Script and Slide Version

Adapted by Carl Dennis

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TITLE:	High Blood Pressure
AUTHOR:	James W. Woods, M.D. Script and slide version by Carl Dennis
INSTITUTION:	Health Instruction Exchange
INTENDED STUDENTS:	Public
ESTIMATED WORKING TIME:	20 minutes
MATERIALS NEEDED:	Slide viewer

FIELD TEST VERSION

NOTE: In this version, a script is provided for the user to read along as he changes slides. A third version - with tape and slides - is also available, as well as the original paper-and-pencil unit by James W. Woods, M.D.

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Put your imagination to work for a short, informative trip into that mysterious area of high blood pressure your doctor and nurses talk about. Please change the slides in the viewer to match each number of this script as you read. Asterisks ******** mark five places for you to stop and write on the "Follow Along" sheet.

1. (SFX: MUSIC, BAGPIPES, SLOW DRUM BEAT)

2. (CONTINUE SFX: FROM LAST FRAME)

3. (CONTINUE SFX FROM LAST FRAME, ADD SOUND OF BUZZING MOSQUITO)

4. (CONTINUE SFX FROM LAST FRAME)

5. (CONTINUE SFX)

6. (CONTINUE SFX BUT ADD AFTER A FEW SECOND PAUSE, SOUND OF A MILITARY COMMAND BEING GIVEN TO TURN A LARGE GROUP OF PEOPLE.)

7. (SFX: LIGHT SNARE DRUMS UNDER NARRATION

NARRATOR:

Did you know that each of us has blood pressure?

8. That's right! And our blood pressure's never the same.

9. It goes up with excitement or ...

10. ...anger! And it falls with..

11. ... rest or sleep. That's just normal

12. Sometimes though, as our blood circulates through the arteries, under pressure, pumped along by the heart, the ...

13. ...pressure may go higher than normal and ....

14. ...it might stay that way over a period of time. Then it's called hypertension or high blood pressure spelled with a capital "P", and that means trouble.

15. It's the kind've trouble we're going to be talking about here. When you finish this program,.....

16. ...you'll be able to answer questions most often asked by patients.

17. For example, what is high blood pressure or hypertension? We'll be using the terms high blood pressure and hypertension interchangeably.

18. What causes hypertension or high blood pressure?

19. What trouble can hypertension cause?

20. What can a doctor do? And,.....

21. What can <u>you</u> do? Let's go back to ....

22. ...that first question, "What is high blood pressure?".

(SFX: HEART BEAT FADE DOWN UNDER NARRATION)

Each time your heart beats, it forces the blood to flow against the artery walls.

23. It's this force that's measured when your blood pressure is taken.

24. Because artery walls are elastic and muscular, they stretch every time the heart pumps blood in, making the pressure go up.

25. When the heart relaxes, arteries contract and pressure goes down.

26. (SFX: FADE UP AND DOWN HEART BEAT) This happens sixty to eighty times every minute. Up and down, up and down as your blood circulates. That's why there's an upper and lower measured pressure.
(SFX: OUT)

27. The upper pressure is called "systolic" and can range from one hundred twenty to two hundred fifty.

28. The lower pressure is called"diastolic" and it can range from seventy to one hundred forty.

29. If we measured our puffing friend, we might find figures like these. Think to yourself: what does the one-eighty refer to? How about the one-hundred?
(PAUSE FOR EFFECT)

30. Well, if you thought "systolic" for the one-eighty and "diastolic" for the one-hundred, you've got your pressures down. Now, it may help you...

31. ...to feel the radial artery in your wrist. Just place your first and second fingers like you see here. Try it!

(PAUSE 5 SECONDS)

Do you feel a kind of vibration or "beat" when the artery expands as the pressure goes up and relaxes as it comes down?

32. So, when we measure this blood flow in the arteries, we call it, (PAUSE)... think to yourself a second. (PAUSE)

33. RIGHT; blood pressure!

34. Now, in adults, a normal flow of blood in the arteries, a normal blood pressure, is up to a one forty systolic over ninety diastolic. It's a little lower in children.

35. But think of your arterial system as a tree. It has smaller and smaller twigs branching off from the limbs.

(SFX: WATER FLOWING)

36. The smallest twigs of the arterial system help control your blood pressure...

37. ...when they contract or relax, they make it easy or hard for the blood to pass through. It can make that pressure go up, too!

38. It works like a nozzle controlling water. When the vessels clamp or squeeze down, the pressure goes up in the bigger arteries and the heart has to work harder to force the blood through.

(SFX: WATER FLOWING OUT)

39. What, for example, would you consider a pressure of one eighty over one hundred?

(PAUSE 4 SEC)

40. Well, we would say a pressure of one eighty over a hundred was "moderately elevated." How about two hundred thirty over one hundred thirty?
(PAUSE FOR EFFECT)

41. A blood pressure of two thirty over one thirty would have to be considered "very high."

42. Now, you might ask, what about low blood pressure? Well, since low pressure places less stress on the heart, it is usually a good thing and rarely a sign of a disorder needing treatment.

43. So relax. Don't get high blood pressure worrying about low blood pressure... or anything else.

44. What causes hypertension or high blood pressure?

45. There's no easy answer. In nine out of ten patients, the cause is unknown. Then it's called <u>essential hypertension</u>.

46. Somehow, the small arteries are clamped down making it difficult for the blood to pass through. It's not yet known why.

47. (SFX: TONE SWEEP, LOW FREQ. PHASING IN BACKGROUND)
Emotions probably play a part.

48. We live in a world of environmental stress.

49. We continually adjust our living patterns each day just to cope with it!

50. It's possible that persons who react to even mild life stresses with large rises of blood pressure will.....

51. ....eventually, get a permaaant blood pressure...

52. ...elevation. (PAUSE FOR EFFECT)
And we know...

53. ...for certain that inheritance plays a part because hypertension often runs in families.

54. Salt is probably important. Almost all of us eat more than we need.

55. A low salt diet, or maybe a diuretic... a water pill... will lower pressure in most people.

56. In one out of ten patients...

...a curable cause of hypertension can be found, and, removed.

57. A small tumor may be pouring a chemical into the blood. Or....

58. ...there may be disease of a kidney

59. A blood vessel may simply be blocked.

60. The point is, some patients have a curable cause for hypertension!

****** 61. Try answering a couple of questions. For number one on your answer sheet, check how many patients have a known cause for hypertension which is also removable?

(PAUSE 5 SECONDS)

***** 62. Now, check two of the things you see here which are thought to play a part in causing essential hypertension.

63. Well, if you said one out of ten patients had a known cause for hypertension and you checked emotion, inheritance, or salt, you are right on track again!

64. So, what trouble can hypertension cause? Well,....

65. ...complications need not occur in most patients if blood pressure is controlled with a team effort by you, your family, the doctor and nurse.

66. Still, those with severe or uncontrolled blood pressure may have injury to the heart, brain, lungs or kidneys.

67. (SFX: MOTOR--LARGE MACHINE-LIKE NOISES) For example, lung blood vessels may become strained and in turn, put strain on the heart! When the heart has to pump against increased resistance, it gets thicker or bigger.

68. A heart may eventually fail if pressure is not lowered.

69. Kidneys may be damaged and even fail.

70. Strain placed on the arteries may cause hardening.

(SFX: FADE OUT)

71. And then, an artery is more likely to rupture or develop a clot which may cause a stroke, or brain injury.

***** 72. Please take a moment and choose four organs most easily affected by uncontrolled high blood pressure. Circle your answers for question three on your sheet.
(PAUSE 5 SECONDS)

73. The brain, the lungs, the heart and the kidneys can all be damaged by uncontrolled high blood pressure or essential hypertension. And,

74. ...it is often the damage to these organs which give <u>you</u> the <u>symptoms</u> of hypertension. But,.....

75. Patients with mild hypertension may live for years without bad effects. And patients who...

76. ...faithfully follow their treatment and have their pressure controlled at normal or near normal levels may live comfortably and usually avoid the bad effects of high blood pressure.

77. What can the doctor do?

78. Because doctors. need to know how well a patient is tolerating high blood pressure, a physical and laboratory exam is necessary. The doctor can...

79. ...then search for a curable cause and he can tell exactly what shape your blood vessels, heart and kidneys are in.

80. And, because being overweight and smoking cigarettes increases the chances of blood vessel and heart injury,..

81. ...your doctor may advise you to lose weight and slow down or quit smoking altogether.

82. There are a number of drugs for controlling blood pressure. Your doctor may choose one which will best control your pressure.

*****

83. So a doctor can help you in many ways but, before he starts, he must give you an examination and some tests. Please check the correct reasons for taking these exams or tests.
(PAUSE 10 SECONDS)

Each of the reasons shown helps the doctor help you.

84. Now, let's look at the most important question of all, "What can you do?"

85. Well, you can make a habit of following your diet and, if it is required,....

86. ...taking your medicine every day. Maintaining blood pressure is a lifetime proposition!

87. Keep clinic or office appointments faithfully. Never let up in your program.

88. Bring your medicine to each clinic visit so that there will be no question as to what you <u>are</u> taking.

89. And, don't leave your troubles outside the office.
<u>Tell</u> the doctor or nurse what <u>your</u> problems are.

90. <u>Remember</u>, you are <u>not</u> <u>alone</u>.

91. Over twenty-one <u>million</u> people in the United States have high blood pressure.

92. Your high blood pressure can be controlled and you can lead a useful and long life.

93. So, why not write the answer to question five in big bold letters? Is high blood pressure uontrollable?
(PAUSE 5 SECONDS)
(SFX: CHEERS AT FOOTBALL GAME)

94. With your cooperation, and the help of that team, you bet it is.
(SFX: OUT)

If you'll take a few minutes to fill out the "See How Much You Remember" sheet attached, you'll help yourself and the author of this script-slide unit, who's anxious to see how well he conducted the "High Blood Pressure" trip.

FOLLOW ALONG

1. How many patients have a known cause for Hypertension which is removable?

_____ 1 out of 10?
_____ 3 out of 10?
_____ 9 out of 10?

2. Check two of the things which are thought to play a part in essential hypertension.

_____ Inheritance _____ Emotion _____ Exercise

_____ Laziness _____ Salt _____ Milk

3. Choose four organs most easily affected by uncontrolled High Blood Pressure.

kidneys heart
stomach lungs
brain

4. Check the correct reasons for taking exams and tests:

_____ So the doctor can search for a cure
_____ So the doctor can give more accurate advice
_____ So the doctor can decide on a drug which might be best for you

5. Is High Blood Pressure controllable? (Write YES or NO)

SEE HOW MUCH YOU REMEMBER

1. High Blood Pressure is due to increasing resistance to blood flow in:

   _____ a. Small arteries _____ b. Veins

2. a. The cause of High Blood Pressure is known in (please check one):

   _____ most patients _____ few patients

   b. Contributing factors to High Blood Pressure are emotions, inheritance, and salt. Please circle one: TRUE FALSE

3. The organs which are most often damaged by uncontrolled HIgh Blood Pressure are the (Pick out 3):

   _____a, brain _____d. stomach
   _____b. lungs _____e. kidneys
   _____c. heart

4. Diagnostic examination and tests before treatment help the doctor in which ways?

   ____ a. He can search for a cure
   ____ b. He can give more accurate advice
   ____ c. He can decide on a drug which might be best for you

5. If the doctor does his part and you do your part, it has been proven that the result will:

   ____ a. make no difference
   ____ b. Give you an excellent chance of living a longer and healthier life

Now, if you would, complete the chart below. This program was

Stimulating	Boring
Too difficult	Tpo easy
Dull	Fun
Helpful	Useless
Too long	Just right
Meaningful	Silly

ANSWERS
1. a. small arteries
2. a. few patients, b. True
3. a. brain, b. lungs, c. heart, e. kidneys
4. all three (a, b, and c
5. give an excellent change

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RISK FACTORS IN HEART DISEASE
HOW DO YOU RATE?

by

Patricia A. Tabloski, R.N., B.S.N.

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TITLE:	Risk Factors in Heart Disease- How Do You Rate?
AUTHOR:	Patricia Tabloski, R.N., B.S.N.
INSTITUTION:	Freehold (N.J.) Area Hospital
INTENDED STUDENTS:	Public
ESTIMATED WORKING TIME:	25 minutes
MATERIALS NEEDED:	None
REVISED:	September 1, 1977

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INTRODUCTION

We are all potential victims of coronary heart disease.

There are certain facts about everyone's life and health that will increase or decrease an individual's coronary status. These facts are called "risk factors".

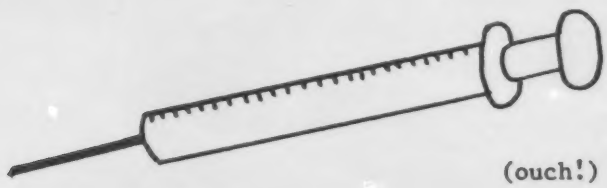
The Risk Factor Game (How Do You Rate?) was created - with numbers arbitrarily assigned to "risk factors" - so that you can get an overall picture of your own individual coronary status.

The Risk Factor Game is <u>not</u> a medical diagnosis; it is only a method of letting you evaluate how healthy your life style is.

Risk Factors are facts about your life and health that may lead to coronary heart disease. Some of these risk factors are "inherited" or contracted in our life, and there is nothing we can do to change them.

A family history of heart attack or early heart disease may be one.

Diabetes may be another you're "stuck with".



(ouch!)

Or. . . . .

P e r s o n a l i t y T y p e

However. . . .

Some Risk Factors are quite changeable - like:

Smoking

Obesity

OR

Hypertension
(High Blood
Pressure)

Or others like:

Stress

AND

Diet

Question 1

Risk Factors are facts about your life and health that lead to coronary heart disease.

A. Check the Risk Factors that are "inherited" or contracted in our life, and there is nothing we can do to change them.

____ Diabetes

____ Personality type

____ Obesity

____ Family history of heart attack

____ Stress

____ Early heart disease

____ Diet

____ Hypertension (High Blood Pressure)

____ Smoking

B. Check the Risk Factors that are "changeable"; those which may be reduced or altered.

____ Obesity

____ Early heart disease

____ Diet

____ Hypertension (High Blood Pressure)

____ Smoking

____ Stress

____ Family history of heart attack

____ Diabetes

____ Personality type

A. The correct list is: Diabetes

Personality type

Family history of heart attack

Early heart disease

B. The correct list is: Obesity

Diet

Hypertension (High Blood Pressure)

Smoking

Stress

List "B" is the most important to remember, because they are Risk Factors that we may reduce or alter.

If both your lists were correct, you're ready for the next exercise. If our answers did not agree, please reread the section.

You're ready to play the game!

And find out how you rate. . . .

REMEMBER,

This is not a medical diagnosis. . .

Only an idea of how healthy your life style is. Some people have heart attacks without having any of the risk factors. However, it is a good indication that if you come out"high risk" you should reduce your risk factors.

The Risk Factor Game "playing board" is on the next page.

Turn the page and have a look at the board before turning back to this page to read the "rules of the game."

The rules, and they're really quite simple:

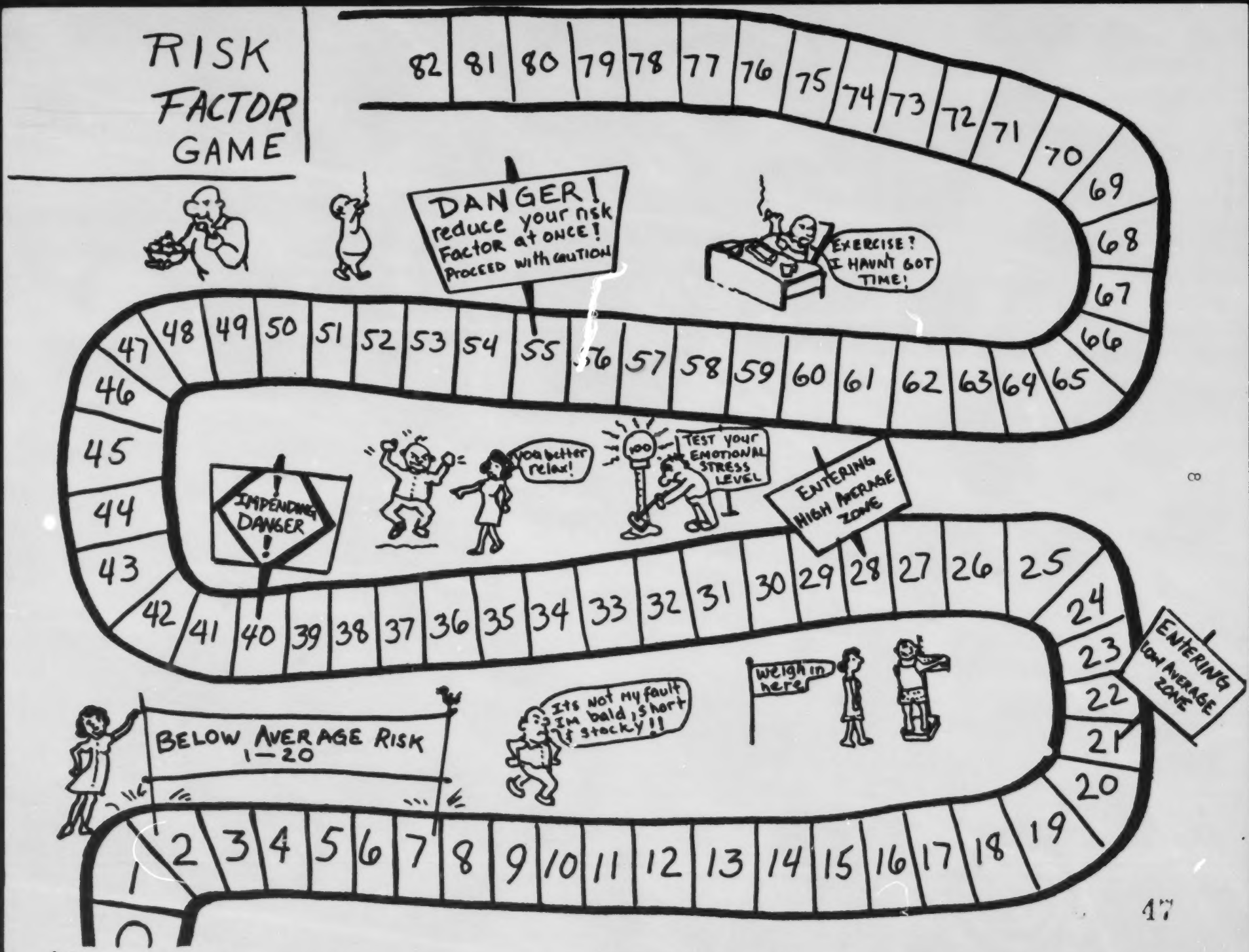
You start at "0".

Then you move your marker (a coin makes a handy marker) the number of spaces indicated by the facts/risk factors, shown on the pages following, that apply to you. You never move your coin back to zero ; just keep adding spaces as you work through the unit.

BE HONEST!

PLAY FAIRLY!

Don't cheat yourself out of precious years of life.


RISK FACTOR GAME
82 81 80 79 78 77 76 75 74 73 72 71 70 69 68 67 66 65 64 63 62 61 60 59 58 57 56 55 54 53 52 51 50 49 48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
DANGER! reduce your risk Factor at ONCE! Proceed with caution
EXERCISE? I HAVN'T GOT TIME!
IMPENDING DANGER !
you better relax!
100
TEST your EMOTIONAL STRESS LEVEL
ENTERING HIGH AVERAGE ZONE
ENTERING LOW AVERAGE ZONE
weigh in here
Its not my fault IM bald, short & stocky!!
BELOW AVERAGE RISK 1—20

We'll start with three facts/risk factors that are "inherited" or contracted in our life; our sex, history of heart disease in the family, and our age.

Starting at "0" on the game board, move your marker the number of spaces indicated for each description into which you fit, in each of the Risk Factor categories listed below.

SEX

Female - move 1 space

Female over 45 - move 2 spaces

Male - move 4 spaces

Bald male - move 5 spaces

Bald, short male - move 6 spaces

Bald, short, stocky male - move 7 spaces

HEART DISEASE

No known history of heart disease - move 1 space

1 relative over 60 with heart disease - move 2 spaces

2 relatives over 60 with heart disease - move 3 spaces

1 relative under 60 with heart disease - move 4 spaces

2 relatives under 60 with heart disease - move 6 spaces

3 relatives under 60 with heart disease - move 7 spaces

AGE

10 - 20 move 1 space

21 - 30 move 2 spaces

31 - 40 move 3 spaces

41 - 50 move 4 spaces

51 - 60 move 6 spaces

61 + move 8 spaces

you've moved your marker on the game board. Now, let's check that you're playing the game correctly.

Question 2

A. How many spaces on the game board would you have moved from "0" if you were a bald, short male, had one relative over 60 with heart disease, and were 51 years old?

____ 12 spaces

____ 13 spaces

____ 14 spaces

____ 15 spaces

B. Let's try another example. How many spaces from "0" would you have moved if you were a bald, short, stocky, male, had one relative under 60 with heart disease, two relatives over 60 with heart disease, and were 36 years old.

____ 18 spaces

____ 15 spaces

____ 17 spaces

____ 16 spaces

A. If you checked "14 spaces" you were correct.

Bald, short male	6 spaces
One relative over 60 with heart disease	2 spaces
51 years old	6 spaces
	14 spaces

B. "17 spaces" is correct

Bald, short, stocky, male	7 spaces
One relative under 60 with heart disease	4 spaces
Two relatives over 60 with heart disease	3 spaces
36 years old	3 spaces
	17 spaces

Even if both your answers were correct, recheck the number of spaces in each category, as they relate to your risk factors. And then recheck your addition. It's easy to add 2 and 2, and get 5. At least it is for me!

Now let's talk about some risk factors that are "changeable"; those we can do something about, our weight and emotional stress; and our individual personality, which we're stuck with.

On your game board, move your marker forward for the number of spaces indicated for each description into which you fit, in each of the Risk Factor categories listed below.

WEIGHT

More than 5 lbs below standard weight - move no spaces

-5 to +5 lbs to standard weight - move 1 space

5 to 20 lbs overweight - move 2 spaces

21 to 35 lbs overweight - move 3 spaces

36 to 50 lbs overweight - move 5 spaces

51 to 85 lbs overweight - move 7 spaces

EMOTIONAL STRESS

Minimal amount occasionally - move no spaces

Minimal amount continuously - move 1 space

Moderate amount occasionally - move 2 spaces

Moderate amount continuously - move 3 spaces

Severe amount occasionally - move 4 spaces

Severe amount continuously - move 5 spaces

PERSONALITY TYPE

A - Assertive, always striving for new goals, high strung, moves about quickly. Frequently finishes sentences for people. Move 4 spaces.

B - Relaxed, easy-going, can wait and wait, and wait... Move 1 space.

Question 3

A. When my friend Hoagy took this learning unit, and looked at the weight, emotional stress and personality categories, he added up his Risk Factors and only had to move one space forward. Briefly describe Hoagy:

Weight _____

Emotional Stress _____

Personality _____

B. Now there was Harry. His Risk Factors added up to 16 spaces. Describe Harry:

Weight _____

Emotional Stress _____

Personality _____

C. Briefly describe what Harry should do to reduce his Risk Factors.

_____

_____

_____

A. Hoagy is slim, at least 5 lbs below standard weight; he undergoes a minimal amount of emotional stress, and then only occasionally; and he's relaxed and easy going.

(NOTE: You may not use the same words I have to describe Hoagy, and Harry, but our overall descriptions of the two men would be essentially alike.)

B. Harry is way overweight, at least 51 lbs; he has a severe amount of emotional stress continuously; and he's assertive, high strung, and moves quickly.

C. Harry should lose weight; he should try to reduce emotional stress and he should try to relax and become more easy-going.

Now for our final four "changeable" Risk Factors. Remember, these are ones that we can do something about.

As before, move your marker forward on the game board the number of spaces indicated for each Risk Factor description into which you fit.

SMOKING

Non-user - move no spaces

Cigar and/or pipe - move 1 space

10 cigarettes a day - move 2 spaces

20 cigarettes a day - move 4 spaces

30 cigarettes a day - move 6 spaces

40 cigarettes a day - move 10 or more spaces

EXERCISE

Hard work and recreation - move 1 space

Moderate work and recreation - move 2 spaces

Sedentary work and intense recreation - move 3 spaces

Sedentary work and moderate recreation - move 5 spaces

Sedentary work and light recreation - move 6 spaces

Complete lack of all exercise - move 8 spaces

BLOOD PRESSURE

Top of First Number (Systolic)

100 - move 1 space

120 - move 2 spaces

140 - move 3 spaces

160 - move 4 spaces

180 - move 6 spaces

200 or over - move 8 spaces

CHOLESTEROL *

Below 180 mgm% - move 1 space

181 - 205 mgm% - move 2 spaces

206 - 230 mgm% - move 3 spaces

231 - 255 mgm% - move 4 spaces

256 - 280 mgm% - move 5 spaces

281 - 300 mgm% - move 7 spaces

* NOTE: If you're not sure, you can guess. A low cholesterol diet has butter or beef no more than once a week and less than three eggs a week. Organ meats, shellfish, butter, whole milk, bacon, are all high in cholesterol. You probably rate somewhere in between. Rate yourself towards the end of the scale to which you fall.

Question 4

Mary has an office job and sits at a desk all week, but on the weekends she plays tennis - practically from sun-up to sun-down. The only time Mary doesn't have a cigarette in her mouth is when she's actually playing tennis. Mary's blood pressure is about 160, and she has no cholesterol problem.

A. Write down the Risk Factor that could be most detrimental to Mary's life and health. _____

B. If Mary were able to eliminate the above Risk Factor, what Risk Factor could now be most detrimental to her life and health?

A. Smoking.

Smoking could be the Risk Factor most detrimental to Mary's life and health since exercise rates 3 spaces, blood pressure 4 spaces, and she has no cholesterol problem (say 1 to 3 spaces). But smoking all the time could put her in the 30 to 40 cigarettes a day range, and that's 6 to 10 spaces.

B. Blood pressure.

With Mary no longer smoking, Mary's blood pressure, at about 160 (with a 4 space risk factor), could be her next concern. Mary should take time to talk to her Doctor or Nurse about her blood pressure.

Well, you've played the game. . . !

How did you rate?

Notice any places to trim off some points. . . ?

Did you take any big jumps?

If you did, you should ask your Doctor or Nurse for information on reducing your Risk Factors.

SELF-CHECK

1. In any given category of Risk Factors is it better for you to have a high number or a low number? Check one:

   A. _____ High Number (5 or 6)

   B. _____ Low Number (1 or 2)

2. Which score can be altered, a 5 in Weight or a 5 in Family History? How?

3. Is a breakfast of bacon, eggs and buttered toast a high or low risk breakfast in terms of coronary heart disease? Why?

4. In the following list of Risk Factors, check the ones that are "changeable"; those that we, perhaps, can reduce or alter.

A._____Age	H._____Hypertension (High Blood Pressure)
B._____Cholesterol	I._____Obesity
C._____Diabetes	J._____Personality type
D._____Diet	K._____Sex
E._____Early heart disease	L._____Smoking
F._____Exercise	M._____Stress
G._____Family history of heart attack	

5. If you've reached the Danger Zone on the game board, what would be a very wise thing for you to do? Write your answer.

_____

_____

6. This Risk Factor Game was:

Clear_____	Confusing_____
Enjoyable_____	Boring_____
Useful_____	Useless_____

Please add any comments you'd like to make._____

_____

SELF-CHECK ANSWER KEY

1. B

2. B (Weight can be altered by dieting.)

3. High risk. Bacon, eggs and buttered toast all contain large amounts of cholesterol.

4. B

   D

   F

   H

   I

   L

   M

5. Talk to your Doctor or Nurse and get information on how to reduce your Risk Factor(s).

6. Thank you for your help in evaluating the effectiveness of this learning unit.

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A PROJECT OF THE LEAGUE FOR INNOVATION IN THE COMMUNITY COLLEGE

LEARNING HOW, WHY AND WHEN TO TAKE A RADIAL PULSE CORRECTLY

By

Lucille N. Paradela, R.N.

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TITLE OF PACKAGE:	Learning How, Why and When To Take A Radial Pulse Correctly
AUTHOR:	Lucille N. Paradela, R.N.
INSTITUTION:	Los Angeles City College, Los Angeles, Calif.
INTENDED STUDENTS:	Patients
ESTIMATED WORKING TIME:	30 minutes
MATERIALS NEEDED:	None

FIELD TEST COPY

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INTRODUCTION

Are you now taking any heart medication such as Digoxin or Lanoxin?

Do you now have an artificial pacemaker, or is your doctor planning to give you one in the near future?

Have you had a heart attack, and therfore need to go on a regular (daily) exercise program?

Or are you an ordinary, healthy specimen of humanity who has a thirst for knowledge, and just want to see how fast your heart beats?

If you answer "yes" to any of the above questions, this self-instruction package is for you.

You will learn to take your radial (wrist) pulse, devise a daily record for keeping track of your pulse rate, and name the reasons why you need to, in ONE EASY LESSON.

Specifically, you will be able to take, record, and state reasons for taking a correct radial pulse count.

Also, upon completion of this package, you will be able to: describe pulse in two words; locate the most convenient place to take a pulse; name 3 classes of persons who need to obtain a correct pulse count; identify two instances when not to take Digitalis medication; from a sample record showing different pulse rates, indicate with a check mark the days when Digitalis can be taken; and count, and record, your pulse rate any given number of times, for stated reasons.

Two words best describe your pulse: it represents your HEART BEAT. It is the vibration that you feel when you place your fingers over an artery.

The PULSE is best felt when the artery lies close to the skin, especially if the artery runs across a bone and has very little soft tissue around it.

The artery found at the wrist at the base of the thumb is the most convenient place that you can feel your own pulse.

1. Now let's see if I have been sufficiently clear.

   Question: In two words, what is the pulse?

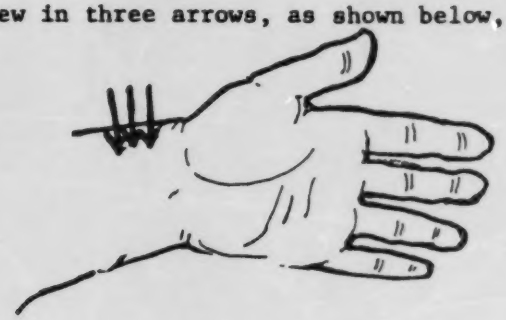
   _____

2. In the diagram below, place three arrows pointing to the part of the wrist where you would take your pulse.

To see if you've answered correctly, turn the page.

If you wrote HEART BEAT for the answer to the first question, you were correct. Easy, wasn't it!

And if you drew in three arrows, as shown below, you were correct again.



There are three important groups of persons who need to learn to take their pulse rate correctly. If you fall under any of the following groups, you should know this basic procedure, which we will teach you in a moment.

FIRST, if you are taking any Digitalis medicine, you have to count your pulse every day before taking your medicine. You should not take the prescribed dose unless your pulse is above 60. If your pulse is at 60, you would not want it to go any lower. If your pulse remains at 60 or below for two consecutive days, and you have not taken your drug, inform your doctor. He may want to reduce your dose.

SECOND, if you have an artificial pacemaker, you need to check your pulse daily upon waking, to make sure that your generator is working properly. Call your doctor if your pulse is below the set rate.

THIRD, you may have had a heart problem, and you have been prescribed a regular exercise program. You have to take your pulse before and after your exercise.

3. In the spaces provided below, write down the types of persons who need to take their pulse correctly.

1) _____

2) _____

3) _____

1) Persons taking Digitalis

2) Persons with artificial pacemakers

3) Heart patients on a prescribed exercise program

(Your answers need not be in the same order as I have them to be correct.)

Doctors usually prescribe a Digitalis preparation for heart patients to take everyday. This drug acts to strengthen and slow the heart beat.

Since Digitalis builds up in the body when given continuously, do not take the drug if you are not sure whether you already took it for the day. It is safer to miss one day's prescribed dose than to take it twice because you forgot if you had already taken your medicine.

We also said that Digitalis slows the heart rate. If your pulse is down to 60, you do not want it to go down any further. So, if your pulse rate is 60 or below, you should omit taking your medicine for the day.

Let me see if I explained myself clearly.

4. For what two reasons would you omit taking your prescribed Digitalis medicine? Place a check beside the correct answer(s) in the space provided.

1) _____ You are feeling good today.

2) _____ You forgot if you already took your medicine today.

3) _____ Your pulse is 60 or below.

The correct answers are numbers 2 and 3.

Even if you are feeling good, you should take your Digitalis because you need to maintain the blood level of the drug in order that your heart stays strong.

Your doctor has prescribed a daily dose of Digitalis.

It is a good idea to take the drug at the same time each day so that the drug is maintained at a constant level in your blood at all times.

If you take and record your pulse each time you take your medicine, it will be impossible to forget that you took your medicine for that day.

Remember that you can take your Digitalis only if your pulse rate is above 60. You do not want it to go lower than this.

Study the chart below. The pulse rates and time taken have been shown as examples.

	Sun	Mon	Tues	Wed	Thur	Fri	Sat
Pulse	78	72	64	58	72	60	70
Digitalis 0.25 mg.				Not taken; called doctor			

5. Mark with a check the days when you are going to take your prescribed medication.

Turn to the next page to see if you checked off the right days.

You checked all days except Wednesday and Friday?

WONDERFUL!

Now you are ready to learn and practice to take your pulse.

You know why and when it is important to take your pulse. It is time to learn how to do so correctly.

This is how you will look.

STEPS	IMPORTANT POINTS
Sit <u>comfortably</u> in front of a table.	An uncomfortable position can increase the pulse rate.
Relax, and rest one hand on the table, palm facing upward. (<u>Left</u>, if right-handed, <u>Right</u>, if left-handed.)	The fingers of the hand you use most of the time are more sensitive to touch.
Place a watch with a second-hand in front of you so that you can <u>easily see the second-hand</u>.	You have to take your pulse for 15, 30, and 60 seconds when you are practicing to take your pulse.

(continued on next page)

STEPS	IMPORTANT POINTS
Gently place the first three fingers of your other hand over your wrist at the base of the thumb. Move your fingers slightly until you feel the pulse well enough to count each beat easily.	The thumb is not used to take the pulse because it has a strong pulse of its own. Pressing hard will prevent you from feeling the pulse well.
If you miss counting a beat or so, do not continue counting. Start timing yourself again until you have made sure that you counted all the beats you felt, whether weak or strong.	Sometimes you get distracted and fail to count one or more beats. Sometimes you may feel that you missed feeling a beat.

The most accurate pulse count is the one taken for 60 seconds because it gives allowance for irregular spacing between beats.

6. Now:

   1) Take your pulse for 15 seconds and record here. _____

   2) Take again, this time for 30 seconds. Record. _____

   3) This time, do it for 60 seconds. Write it here. _____

(Continued on next page.)

4) Multiply your 15 second pulse (#1) by 4. Write the product here _____

5) Multiply the 30 second pulse (#2) by 2. Write it here. _____

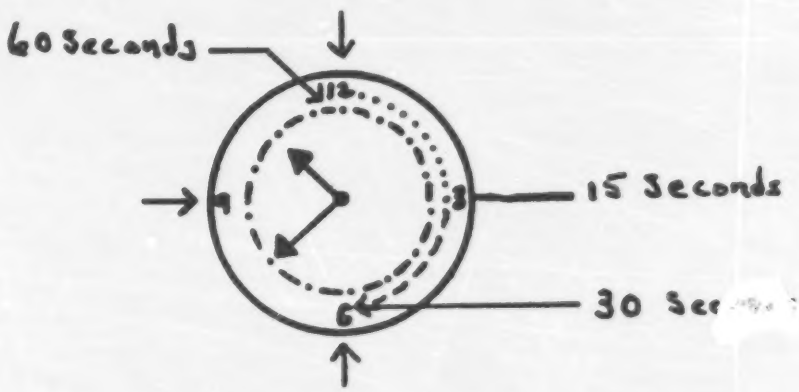
6) Write down your 60 second rate (#3) here. _____

Compare your numbers for 4), 5), and 6). If you are doing your counting correctly, you should not have more than 2 points difference between these three figures.

Do not be discouraged if you are not too successful in your first try. Just like any other manual skill like driving, you improve as you do the skill over and over again.

If you are sure that you are counting each beat correctly, these are the possibilities.

You may not be starting or stopping your count exactly at the 15 second or 30 second, or 60 second mark on your watch. Try starting at the points shown in the diagram below. It may help overcome your inaccuracies the first time.



Even if you are not satisfied with your accuracy this time, do not repeat the above practice more than twice. Your frustrations will just make your pulse rate irregular, and you will get more and more frustrated.

Turn the page to take the Self-Examination and score it. The answer key is on Page 13.

SELF-EXAMINATION

1. What two words best describe the pulse?

2. In the illustration below, draw arrows to show the most convenient place for you to take your pulse.

3. List three types of persons who need to be able to take a correct pulse count.

4. Name two occasions when you should not take your prescribed digitalis.

5. Study the sample medication record that shows pulse rates taken daily for one week. Check the days when you would take your digitalis if these were your pulse rates.

	Sun.	Mon.	Tues.	Wed.	Thur.	Fri.	Sat.
Pulse	78	72	64	58	72	68	60
Digitalis o.25 mg.							

6. 1) Take your 15-second pulse count and record it.

   2) Multiply the count by 4 and record the result.

   3) Take your 30-second pulse count and record it.

   4) Multiply the count by 2 and record the result.

   5) Take your 60-second pulse count and record it.

   6) Compare the answers to 2), 4), and 5). Is there more than 2 points difference between any two?

ANSWERS TO SELF-EXAMINATION

1. Heartbeat

2.

3. Patients taking Digitalis medications, persons with an artificial pacemaker, and heart patients on a prescribed exercise program.

4. When your pulse is 60 or below, and when you have forgotten whether you have taken your Digitalis medication for the day.

5.

Week of JAN. 15	Sun	Mon	Tues	Wed	Thur	Fri	Sat
Pulse	78	72	64	58	72	68	60
Digitalis 0.25 mg.	X	X	X		X	X	

6. You kept calm, counted, and did your calculations correctly if the answers to 2), 4), and 5) do not vary more than two points.

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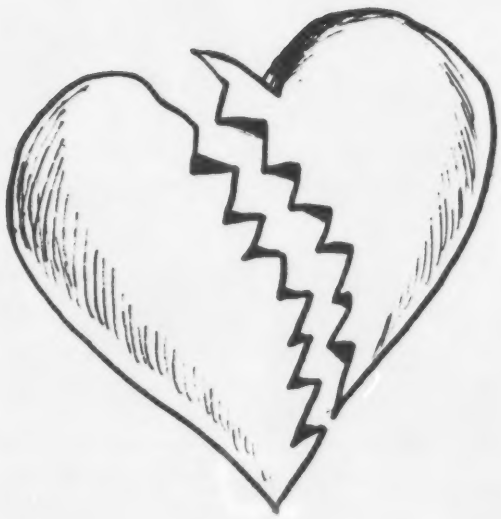
HEART ATTACK

ATTENTION TO YOUR LIFESTYLE

By

Erna Olsen



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TITLE OF PACKAGE:	HEART ATTACK: ATTENTION TO YOUR LIFESTYLE
AUTHOR:	ERNA OLSEN
INSTITUTION:	Cosumnes River College, Sacramento, Calif.
INTENDED STUDENTS:	Public
ESTIMATED WORKING TIME:	40 minutes
MATERIALS NEEDED:	None
REVISED:	Sept. 1, 1977

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INSTRUCTIONS

Plan to compile a log this week of your eating, smoking, exercise or other habits that affect your health. What is the reality of what you are doing?

This unit will help you with Self-assessment. Excess? Not enough? Deep down inside, one knows if one is over-eating, smoking too much, or not getting enough exercise. Why allow ourselves this slow, insidious buildup of poor health habits as many do? Does it take a crisis or can we take stock now? Assess now!

At the end of this packet you will change your health behavior to lessen the possibility of a heart attack in future years.

More specifically . . .

1. You will be able to briefly state statistically the scope of the problem of heart attacks.
2. You will be able to identify five basic areas for consideration in the prevention of heart attacks.
3. You will be able to incorporate information on the prevention of heart attacks in interaction with others.

Take a step forward.

INTRODUCTION

The possibility of having a heart attack seems remote and far away for most of us. It is unpleasant to contemplate, and admittedly easier to avoid thinking about it on a day to day basis.

But the fact remains, the heart attack is the number one killer causing more than 660,000 deaths annually in the United States. Heart attack and its companion, stroke, together strike nearly two million people each year in the United States. There are 23 million Americans with high blood pressure.

How do you translate these statistics into human sorrow, crippling effects, loss of jobs, costly medical expenses, deaths, and interruption of careers?

The incidence of non-communicable chronic disorders has shot up dramatically in the past few decades for many reasons. One theory holds that people are living longer to an age where they may succumb to chronic, dgenerative disease. Another theory is that new and better diagnostic techniques allow doctors to discover cancer, diabetes, heart disease, and others than in the past, raising the figures. Another possibility is increased stresses and changes in our modern environment.

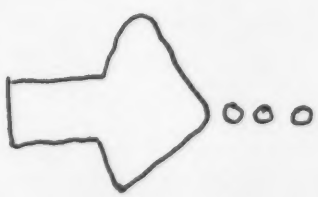
Although few people have viewed life styles as major health problems in the past, it is apparent that many of our daily habits and modes of living, such as our increased consumption of animal fats and sugar-rich foods, and decreased expenditure of muscle energy, our persistent reliance upon cigarettes and alcoholic beverages, and our susceptibility to tension, have combined to assault Americans everywhere.

Steps are being taken to educate people, but how often have <u>YOU</u> read or heard of sound health practices but failed to ACT?

AWARENESS OF THE PROBLEM AND CHANGE IN ONE'S LIFESTYLE IS OFTEN IMPERATIVE FOR IMPROVING OR MAINTAINING ONE'S HEALTH AND WELL BEING.

Ready? Let's take the next step.

NO. 1 KILLER



PRACTICE EXERCISE # 1

An American Heart Association Pamphlet states:

"a silent Killer
is stalking our nation,
Unseen,
Unheard.
It strikes in a crowd...
or alone.
it kills
the young,
the old,
the rich,
the poor.
It kills today.
It killed centuries ago.
and it will kill tomorrow.

The name of this killer is
HEART ATTACK,
and it's companion is
STROKE.
Together they strike
nearly two million people
each year
in the United States."

Heart attack surpasses cancer as the Number One Killer in the United States.

There are 660,000 deaths annually in the United States due to heart attacks.

Heart attack take its toll in human lives and suffering in many ways.

Practice Question #1

(Circle correct answer or answers.)

1) The number one killer in the United States is:

A. Cancer

B. Heart Attack

C. Stroke

2) Combined with stroke, heart attack strikes the following number of persons in the United States each year:

A. 10,000
B. 2,000,000
C. 150,000

3) Which of the following statistics most accurately reflects the number of deaths annually caused by heart attacks.

A. 100,000

B. 660,000

C. 950,000

4) Which of the following effects concern you most following a heart attack? (Subjective Answer)

A. Death

B. Crippling effects

C. Interruption of career

D. Human Sorrow

E. Medical expenses

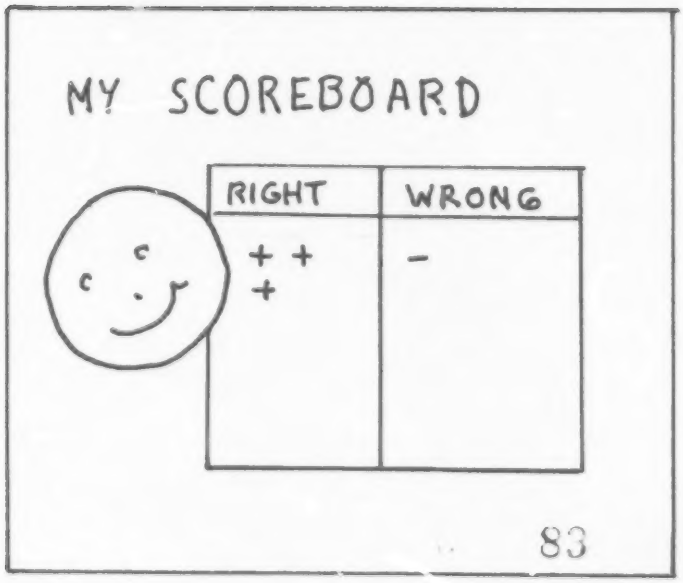
F. Others

FEEDBACK:

Dramatic. isn't it? Then again, having a heart attack is very dramatic. For questions 1,2, and 3 did you circle B as the correct answer? Good!

On question 4, did you find yourself thinking of the after effects of a heart attack? There is no one answer. Effects would vary according to the severity of the heart attack. Remember that for some the first slight heart attack can serve as a warning to change a lifestyle for a longer life. Others don't have that second chance.

Review if you missed an answer. If answers agreed, proceed to the next page.



PRACTICE EXERCISE # 2

Most everyone can reduce these risk factors!

1. obesity
2. a diet high in cholesterol and saturated fats
3. lack of regular exercise
4. cigarette smoking
5. daily stress and high blood pressure

Most of these risk factors can be corrected to avoid a heart attack.

Risk factors which neither you nor your doctor can change include heredity, age, race, and sex. In some families, there is a tendency toward heart attack. The incidence of heart attack also increases with age. Black Americans have a greater risk of heart attack--due to the increased occurrence of high blood pressure. And men are likely to suffer heart attacks earlier in life than women.

The risk factors just mentioned--heredity, age, race and sex-- can't be modified. But, by changing your lifestyle and correction to risk factors, you can control and improve your chance of living a longer, healthier life.

Prevention of heart attack is the best way to deal with the problem. It's not too late to change habits that could be harmful to your heart.

Practice Question #2

True-False Circle correct answer.

T F 1) Risk factors for heart attacks include: obesity, diet, exercise and cigarette smoking.

T F 2) Risk factors for heart attacks neither you nor your doctor can change include: heredity, age, race, and sex.

Feedback

Easy! Both answers were true.

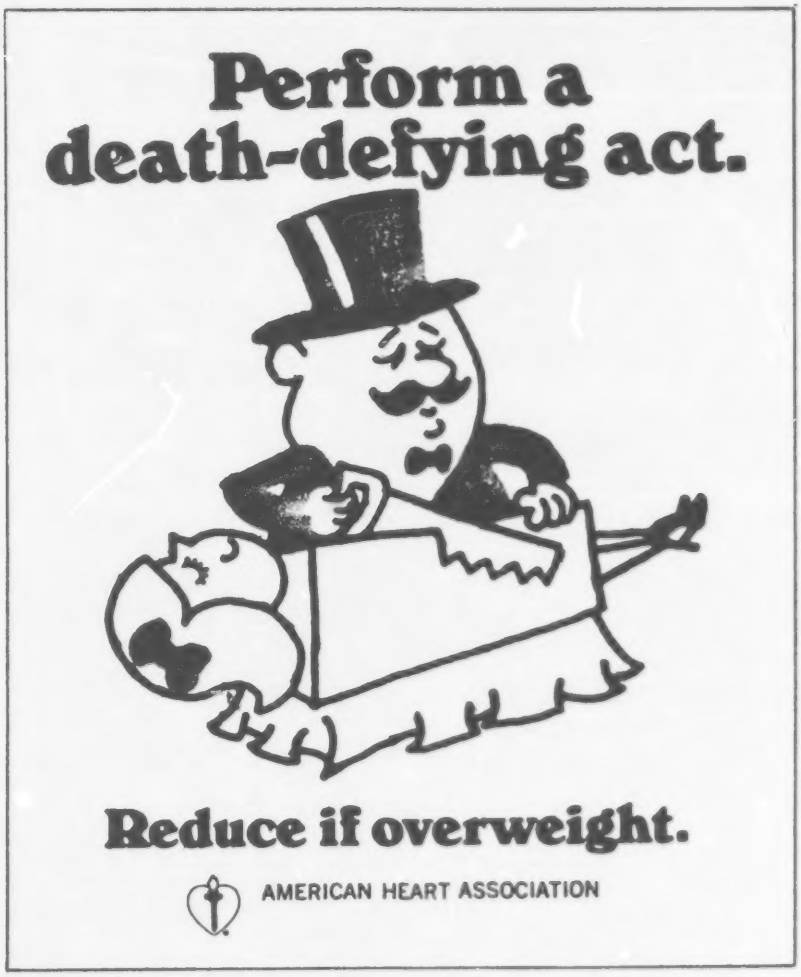
Let's take another step.

PRACTICE EXERCISE # 3

OBESITY

Take the problem of obesity. That's right--excess fat. If you are more than ten pounds over the average of your body build and height, you are overweight.

Can you imagine a person 20 pounds overweight? Can you imagine a person lugging two 10-pound sacks of potatoes around day and night? That extra weight puts additional strain on the circulatory system.



Practice Exercise #3

Locate your desirable weight. Over? Under?

Allow a ten pound margin either way.

DESIRABLE WEIGHTS

Weight in Pounds According to Frame (in indoor clothing)

MEN

Height Feet	Inches	Small Frame	Medium Frame	Large Frame
5	2	115-123	121-133	129-144
5	3	118-126	124-136	132-148
5	4	121-129	127-139	135-152
5	5	124-133	130-143	138-156
5	6	128-137	134-147	142-161
5	7	132-141	138-152	147-166
5	8	136-145	142-156	151-170
5	9	140-150	146-160	155-174
5	10	144-154	150-165	159-179
5	11	148-158	154-170	164-184
6	0	152-162	158-175	168-189
6	1	156-167	162-180	173-194
6	2	160-171	167-185	178-199
6	3	164-175	172-190	182-204

WOMEN

Height Feet	Inches	Small Frame	Medium Frame	Large Frame
4	10	96-104	101-113	109-125
4	11	99-107	104-116	112-128
5	0	102-110	107-119	115-131
5	1	105-113	110-122	118-134
5	2	108-116	113-126	121-138
5	3	111-119	116-130	125-142
5	4	114-123	120-135	129-146
5	5	118-127	124-139	133-150
5	6	122-131	128-143	137-154
5	7	126-135	132-147	141-158
5	8	130-140	136-151	145-163
5	9	134-144	140-155	149-168
5	10	138-148	144-159	153-173

Feedback

If you are like most people,you are probably about 8 to 10 pounds overweight. Not an earthshaking figure - but you would proably feel better if you could trim off the excess weight.

PRACTICE EXERCISE #4

DIET

Numerous studies have shown that many people who exhibit no evidence of heart disease increase their risk of heart attack by consuming a daily diet high in saturated fats and cholesterol.

The typical diet is rich in eggs, meats, butter and cream, the main sources of cholesterol and animal (saturated) fats. These foods tend to raise the blood cholesterol level which contributes to the development of atherosclerosis.

These moderate changes in daily eating habits are recommended.

To Control Your Intake of Cholesterol-Rich Food:

1. Eat no more than three egg yolks a week including those used in cooking.
2. Limit your use of shrimp and organ meats.

To Control the Amount of Fat You Eat:

1. Eat 6 ounces of lean meat, fish, poultry, or vegetable protein daily. (Fish, poultry, and veal are low in saturated fat, so should be eaten more frequently than beef, lamb or pork.)
2. Choose lean cuts of meat, trim visible fat, and discard the fat that cooks out of the meat.
3. Avoid frying food: use cooking methods that help remove the fat-baking, boiling, broiling, roasting, stewing.
4. Restrict your use of fatty "luncheon" and "variety" meat like sausages and salami.
5. Instead of butter and other solid cooking fats which are completely hyrogenated, use liquid vegetable oils and margarines that are rich in polyunsaturated fats.
6. Instead of whole milk and cheeses made from whole milk and cream, use skimmed or low fat and cheeses made from partially skimmed milk.

Practice Question #4

Completion

1) Two ways given to control your intake of cholesterol-rich foods are:

a) _____

b) _____

2) Four ways given to control the amount of fats you eat are:

a) _____

b) _____

c) _____

d) _____

Feedback

1) a. Eat no more than three egg yolks a week including those in cooking

   b. Limit your use of shrimp and organ meat.

2) In your own words were you able to recall:

   a. Eat 6 ounces of lean meat, fish, or vegetable protein daily. (Fish, poultry, and veal are lower in saturated fats than beef, lamb, or pork.)

   b. Choose lean cuts of meat, trim visible fat, and discard the fat that cooks out of the meat.

   c. Avoid frying foods. Baking, boiling, broiling, roasting, stewing, are better.

   d. Restrict your use of fatty "luncheon or variety" meats like sausage and salami.

   e. Use liquid vegetable oils and margarines instead of butter or solid cooking fats.

   f. Use skimmed or low fat milk.

That was a little more difficult to recall. If you missed a question, review or see instructor.

PRACTICE EXERCISE #5

Let me ask you a question. Do you have a regularly scheduled time for exercise? That could mean bicycling, swimming, dancing, jogging, body conditioning, isometrics, skating, basketball, golf ,softball, walking, tennis, handball, or skiing. It is wise to plan for exercise in one's life over the years for many reasons including, keeping in shape, releasing of tensions, recreation, and developing new skills.

Are you tied down to the office, house, or sedentary routine? Do you add exercise by taking the stairs instead of the escalator, or elevator? Do you park a distance away from your destination? Do you ride a bicycle to work? Are you the one who circles the parking lot five times to get a "good" parking place next to the entrance. Good for what? Not sedentary you.

No questions or feedback on this one. I hope you are thinking about your lifestyle now. There is little advantage to being a heart attack statistic in your early 40's or 50's. Sounds remote? It is later than you think inside your body.

PRACTICE EXERCISE #6

SMOKING

Is there a relationship between cigarette smoking and heart disease?

YES. Cigarette smokers have a higher rate of heart attack and a higher death rate from heart attack than non-smokers.

In studies of various population groups, it was found that death rates from heart attacks in men range from 50 to 200 per cent higher among cigarette smokers than among non-smokers, depending on age and the amount smoked. The average amount is 70 per cent.

Smoking is an added risk for people who are more susceptible to coronary artery disease, such as those with high blood pressure, high blood cholesterol, signs of hardening of the arteries, a family history of heart attacks and strokes in middle age, or a combination of any of these conditions.

Does cigarette smoking cause heart disease?

It has not been proven that cigarette smoking is a direct CAUSE of heart disease. However, studies strongly suggest that it contributes to or speeds up the development of coronary artery disease which leads to heart attacks.

Why is there less risk of heart disease among pipe or cigar smokers?
Probably because the pipe and cigar smoker usually does not inhale.
If you have been a heavy smoker, does it help to stop?

YES!

Remember just one cigarette

speeds up your heartbeat

increases your blood pressure

upsets the flow of blood and air in your lungs.

You say you are a non-smoker? Cigarette smoke affects the non-smoker in the same way as the smoker. Inhaling second-hand smoke makes the heart beat faster, the blood pressure go up, and the level of carbon monoxide in the blood increase.

Practice Question #6

TRUE AND FALSE: Mark T or F on left column.

____ 1) Cigarette smokers have a higher rate of heart attacks than non-smokers.

____ 2) Men who smoke cigarettes have the same death rate as non-smokers.

____ 3) Smoking is an added risk to persons with a family history of heart attacks.

____ 4) It has been proven that cigarette smoking is a direct cause of heart disease.

____ 5) A pipe or cigar smoker usually does not inhale as much as a cigarette smoker, so the risk of heart disease is less.

____ 6) One cigarette speeds up heart beat, and increases blood pressure.

____ 7) Cigarette smoke poses no effect on the non-smoker.

FEEDBACK

Answers

1) T

2) F

3) T

4) F

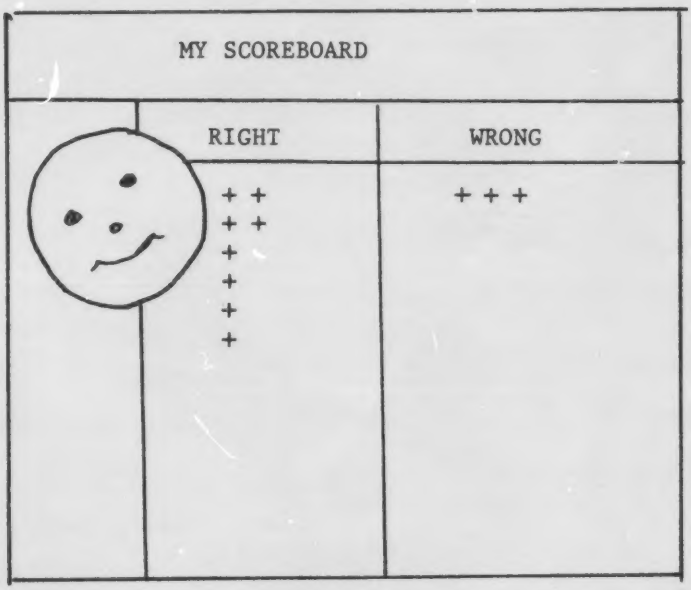
5) T

6) T

7) F

How is your scoreboard?

Turn to next page.



PRACTICE EXERCISE #7

STRESS - HIGH BLOOD PRESSURE

Have you ever been identified as a Type A Personality? Always on the go? Rush. rush. Pressured? Never stopping for a break? Attempting to do more things than you have reasonable time to accomplish? You and I can recognize these people. It is important that you recognize it within yourself.

Can you deliberately slow down the pace? Can you sense when a buildup of a stress occurs? Are you wise enough to change your activity, seek relaxation responses, or attempt to restructure that facet of your personality?

People are beginning to take a careful look at the effects of STRESS.

What is the relationship of stress to high blood pressure (hypertension)? Everyone has high blood pressure. It is the push of your blood to all parts of your body. When your blood pressure goes up and stays there, it is very dangerous to your health. It is not known what causes high blood pressure. Young and old have it. It can be kept under control by medication. Only by having blood pressure checked, can a person tell if it is high. High blood pressure can cause a stroke or heart attack. Twenty-three million Americans have high blood pressure. Hypertension can be controlled by medication.

Here are sound general rules to follow.

1. Try not to worry. Worry, nervous tension, and emotional storms all help to push blood pressure up.
2. Keep your weight normal. Overweight is a health hazard.
3. Follow your doctors' advice on the use of alcohol and tobacco.
4. Get plenty of sleep when blood pressure is lowest.

5. Exercise is good for you, but avoid over exertion at any time.
6. Rest before you are tired. You'll find that you can do more in the long run. And you will avoid the tenseness and irritability that goes with fatigue.

Practice Question #7

Reflective responses only.

1) Do you regard yourself as under more than a normal amount of stress?
2) Do you know anyone that you feel is under constant stress?
3) What changes do you suggest to reduce stress?
4) In a short paragraph - list sound, general rules to follow for control of hypertension.

Feedback

You were asked for only reflective answers this time to think about stress and high blood pressure. It is only by identifying problem areas that specific courses of action can be initiated. "Don't worry." "Stop being so nervous." It is easier said than done. There are changes that can be made especially when one realizes how damaging prolonged worry, tension, and emotional storms can be for an individual.

On question 4, did you note the relationship of stress and high blood pressure to overweight and diet, exercise, and smoking for maintaining your health and well being.

Secure an answer sheet and answer the questions of the following page in the Post-Test. The author hopes you had a positive response to this learning and that you will make candid comments that will be helpful on the revision.

POST-TEST

TOTAL POINTS: 20

Completion

1. The No. 1 killer in the United States is _____.
2. The five areas of risk factors for prevention of heart attack are _____, _____, _____, _____. and _____.
3. The four risk areas for heart attack that neither you nor your doctor can change are _____, _____, _____. and _____.
4. To be considered overweight, a person must weigh over _____pounds for the average body build and height.
5. Sound advice to share with a friend or member of the family about a) controlling fat one eats or B) controlling cholesterol would be _____ _____ _____
6. What is the relationship between cigarette smoking and heart disease?
7. How can high blood pressure be controlled?
8. Why is it important to cover this particular material in this packet? Include statistics and effects.

ANSWERS TO POST-TEST

1. heart attack.
2. overweight; diet; exercise; smoking; stress
3. age race sex heredity
4. 10
5. (Any 2-3 of the following) Reduce intake of fat and cholesterol by any of the following; use low fat or skimmed milk; trim visible fat, choose lean meat, reduce sausage & variety meats, avoid frying food; eat no more than three egg yolks per week, use less shrimp or organ meats; use poly-unsaturated margarine.
6. There is a strong relationship, however, cigarette smoking does not cause heart disease.
7. Medication, sleep, reduce tension, exercise.
8. An individual needs to be very aware of the risk areas for heart attacks and adapt one's lifestyle early for avoidance of a heart attack in their early 40's or 50's. Heart attacks is the No. 1 killer and 660,000 deaths from heart attacks and strokes occur each year.

OPTIONAL QUESTIONS FOR THOSE SEEKING ADDED INFORMATION:

SELF-ASSESSMENT/STRESS

The following test was developed by psychologists to help predict (and perhaps prevent) physical problems that can result from too much change-and stress-in your life.

Think of what has happened to you in the past year as you read through the test. Jot down the point values for events that apply to you in the column at the bottom of the page, then add up your score. If your total for the year is under 150, you probably won't have any adverse reaction. A score of 150-199 indicates a "mild" problem, with a 37 per cent chance you'll feel the impact of stress with physical symptoms. From 200 to 299, you qualify as having a "moderate" problem with 50 per cent chance of experiencing a change in your health. And a score of over 300 could really threaten your well-being.

LIFE EVENT	POINTS	SCORE
1. Death of spouse	100	_____
2. Divorce	73	_____
3. Marital separation	65	_____
4. Jail term	63	_____
5. Death of close family member	63	_____
6. Personal injury or illness	53	_____
7. Marriage	50	_____
8. Fired at work	47	_____
9. Marital reconciliation	45	_____
10. Retirement	45	_____
11. Change in health of family member	44	_____

12.	Pregnancy	40	_____
13.	Sex difficulties	39	_____
14.	Gain of new family member	39	_____
15.	Business readjustment	39	_____
16.	Change in financial state	38	_____
17.	Death of a close friend	37	_____
18.	Change to different line of work	36	_____
19.	Change in number of arguments with spouse	35	_____
20.	Mortgage over $10,000	31	_____
21.	Foreclosure of mortgage or loan	30	_____
22.	Change in responsibilities at work	29	_____
23.	Son or daughter leaving home	29	_____
24.	Trouble with in-laws	29	_____
25.	Outstanding personal achievement	28	_____
26.	Wife begin or stop work	26	_____
27.	Change in living conditions	25	_____
28.	Revision of personal habits	24	_____
29.	Trouble with boss	23	_____
30.	Change in work hours or conditions	20	_____
31.	Change in residence	20	_____
32.	Change in church activities	19	_____
33.	Change in recreation	19	_____
34.	Change in social activities	18	_____
35.	Mortgage or loan less than $10,000	17	_____
36.	Change in sleeping habits	16	_____

37.	Change in number of family get-togethers	15	_____
38.	Change in eating habits	15	_____
39.	Vacation	13	_____
40.	Christmas	12	_____
41.	Minor violations of the law	11	_____
		YOUR TOTAL	_____

*If your score alarms you, do something about it.

FIVE GOOD WAYS TO COPE WITH STRESS

1. Take it easy. Chances are that you will adapt to whatever change is required of you - so try to relax from the start.
2. Consider the bright side. If you can convince yourself that the source of stress is useful or necessary, you'll handle the strain better.
3. Try to avoid surprises. Something predictable is much easier to take. If you can, arrange your schedule to fit around those activities that cause you anxiety.
4. Give yourself some choices. Just knowing that you can avoid something that disturbs you makes it less disturbing - even if you do it anyway.
5. Think long-term. When you recognize why you're accepting small frustrations (and what you have to gain in the end), it's easier to take them in stride.

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This letter gives permission to duplicate copies of the Social Readjustment Rating Scale. The Social Readjustment Rating Scale will appear in two self-study units distributed through the Health Instruction Exchange:

"Heart Attack: Attention to Your Lifestyle"
by Erna Olsen

"Stress and You" by Marjory Stewart Basset

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The Social Readjustment Rating Scale will be footnoted as follows:

> See Holmes, T.H. and Rahe, R.H.: The Social Readjustment Rating Scale, Journal of Psychosomatic Research 11:213-218, 1967, for complete wording of the items.

Signed _____ Date 3 Dec '79

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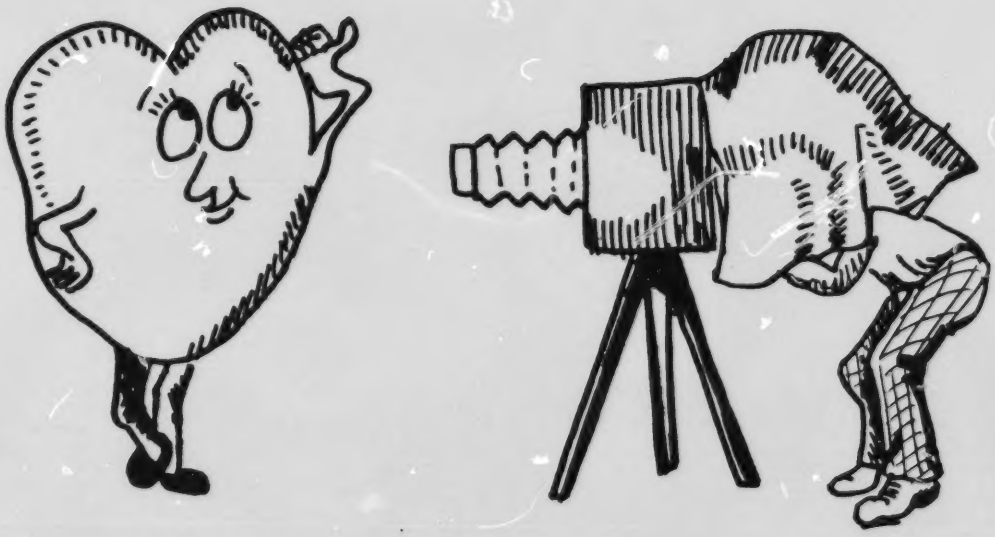
A PROJECT OF THE LEAGUE FOR INNOVATION IN THE COMMUNITY COLLEGE

UNDERSTANDING YOUR CARDIAC CATHETERIZATION

By

Gayle Lacivita and Suzanne Burge

Katherine Lindsey, Illustrator



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TITLE OF PACKAGE:	Understanding Your Cardiac Catheterization
AUTHORS:	Gayle Lacivita and Suzanne Burge
INSTITUTION:	University of North Carolina, Chapel Hill, N.C.
INTENDED STUDENTS:	Patients scheduled for cardiac catheterization
ESTIMATED WORKING TIME:	30 minutes
MATERIALS NEEDED:	None
REVISED	Dec. 15, 1977

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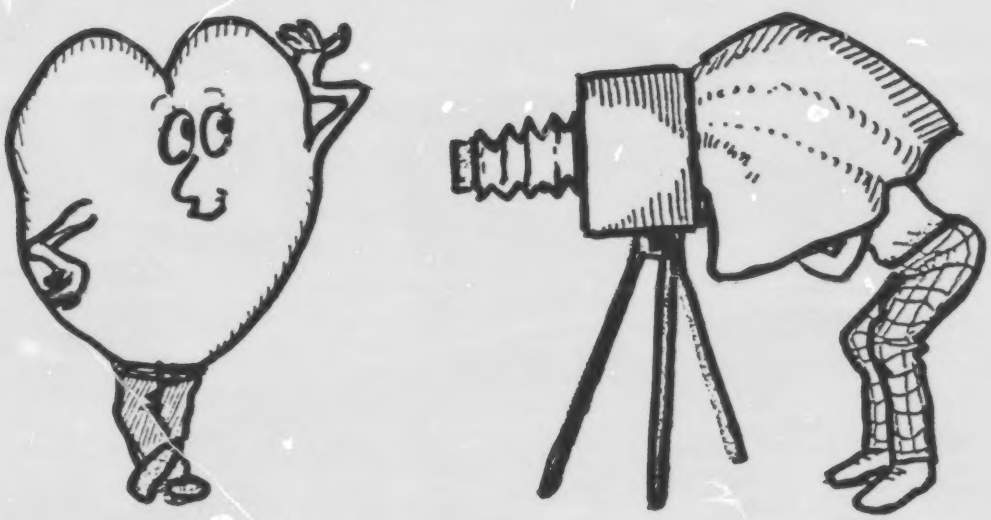
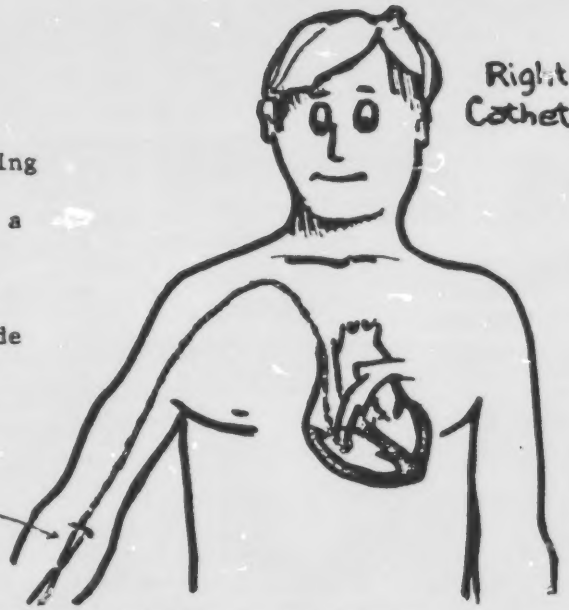
A PROJECT OF THE LEAGUE FOR INNOVATION IN THE COMMUNITY COLLEGE

You are scheduled for a Cardiac Catheterization. You probably will have a lot of questions about this. We hope this packet will give you a basic understanding of what a cardiac catheterization is, how to prepare for it, what will happen during the procedure, and what to expect after it is over.

There may still be parts of the catheterization that are unclear or areas in which you would like more detail, so feel free to ask the doctors or nurses questions.



A CARDIAC CATHETERIZATION is the passing of a catheter (or small tube) through a vein into the right side of the heart or through an artery into the left side of the heart.



The purpose is to determine the amount of disease or defect in the heart and its exact location.

This is only a test and will not correct your heart problem.

Check the correct answer

Practice Question 1
What is a cardiac catheterization?

A. _____ A test to find out how fast your heart beats

B. _____ When the Doctor listens to your heart with a stethoscope.

C. _____ Putting a catheter into your heart to remain permanently.

D. _____ A test to determine the amount and exact location of the disease or defect in your heart.

PLEASE TURN THE PAGE FOR THE CORRECT ANSWER

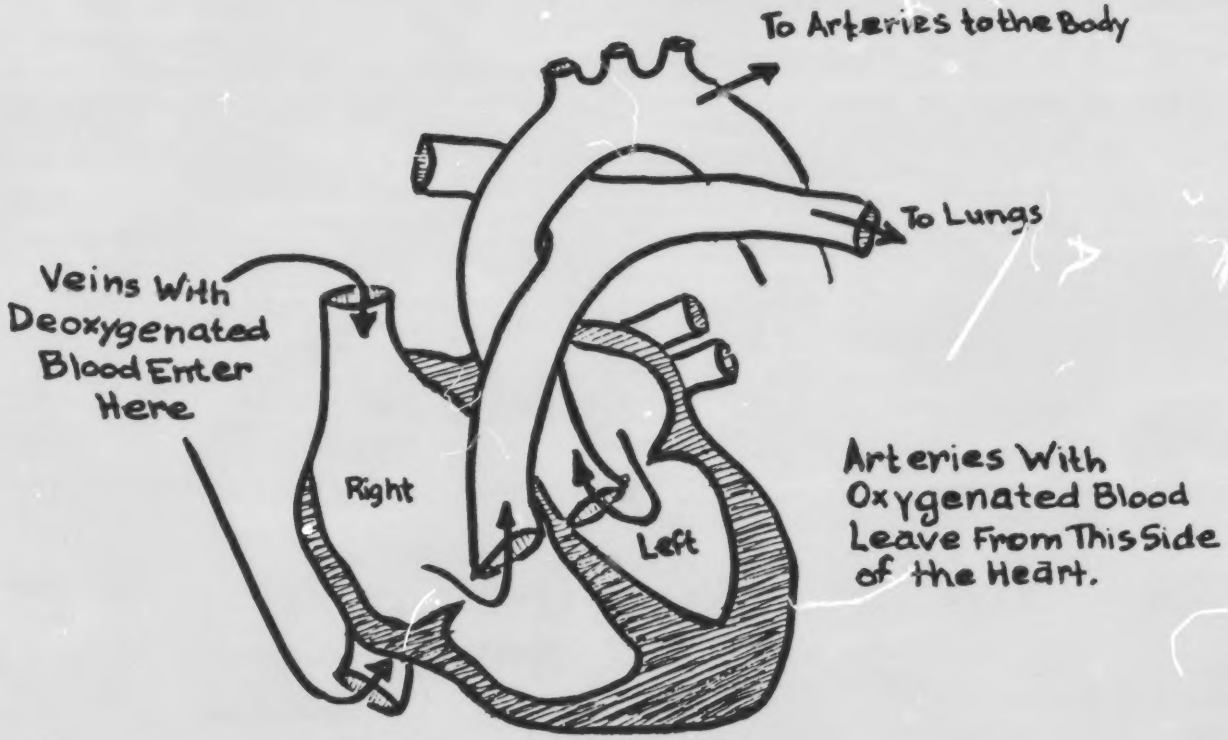
D is the correct answer to the question. You are doing fine if you got that one correct. Go on to the next section. If you did not choose D as the correct answer, please review the information again before you go on.

* * *

The heart is a pump which receives deoxygenated blood (blood with the oxygen used up) from the body into its right side and sends this to the lungs for oxygen.

The oxygenated blood (blood with oxygen added) enters the left side of the heart from the lungs which then pumps this to all parts of the body.

Small tubelike vessels called veins carry the blood with the oxygen used up back to the heart. Arteries are the vessels which carry the blood with added oxygen away from the heart to the body.


To Arteries to the Body
To Lungs
Veins With Deoxygenated Blood Enter Here
Right
Left
Arteries With Oxygenated Blood Leave From This Side of the Heart.

Practice Question 2

Answer this question True or False

Arteries carry deoxygenated blood (blood with the oxygen used up) back to the right side of the heart.

A. _____True B. _____ False

False is the correct answer. Arteries carry OXYGENATED blood (with oxygen added) AWAY from the left side of the heart. If you got this correct proceed to the next section. You are doing GREAT! If you said True you may want to review before going on.

* * *

PREPARATION FOR YOUR CARDIAC CATHERERIZATION

1. A written consent form must be signed giving your permission for this procedure to be done.

2. You will be asked NOT to EAT OR DRINK after MIDNIGHT the night before your catheterization to prevent you from feeling "sick to your stomach" during this test.

3. Your arms (where they bend) will be shaved and washed the night before your catheterization.

4. You will be asked to void (pass your water) before you go to the catheterization laboratory in the morning.

5. About 1 hour before the catheterization you will be given an injection (shot) to relax you. This is NOT to put you to sleep because your cooperation will be needed during the test.

6. Take your glasses and false teeth if you have them with you to the test. One of the TV screens will be positioned so you can watch the X-rays of your heart as they are taken.

That was quite a lot of information to absorb.

Before doing Practice Question 3, take a minute and review the six preparations for catheterization.

All right - Practice Question 3.

List two things you will need to do in preparation for your catheterization.

1) _____

2) _____

If you got at least two of these you are doing fine!

1) Sign a written consent form.
2) Have your arms shaved.
3) Not eat or drink after midnight
4) Void (or pass your water) before the catheterization.
5) An injection will be given to you to relax you.
6) Take your glasses and false teeth with you to the test.

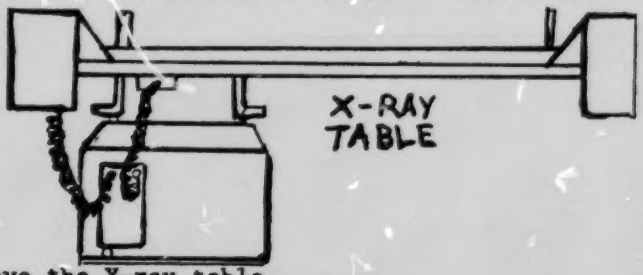
If you couldn't remember these, just review this section again please.

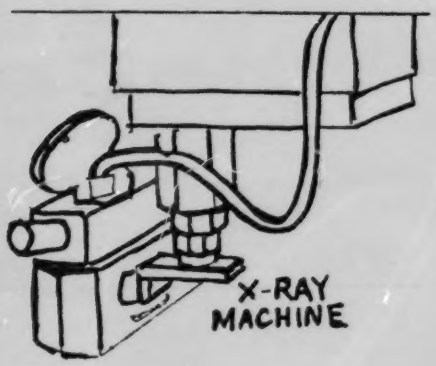
* * *

You will be taken to the Catheterization Laboratory on a stretcher because you will feel relaxed from the medication you received.

As you enter the room where your Catheterization will be done you will see a lot of equipment. You should expect to see:

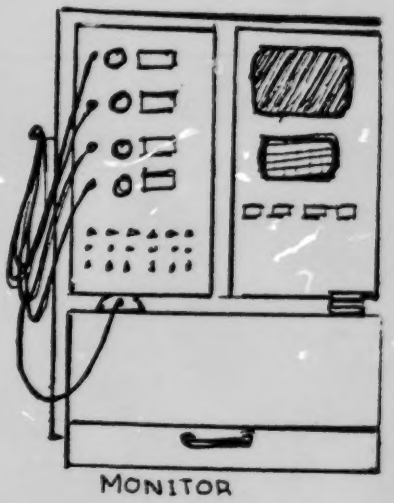
X-ray table -- hard table that can be tilted in various directions.



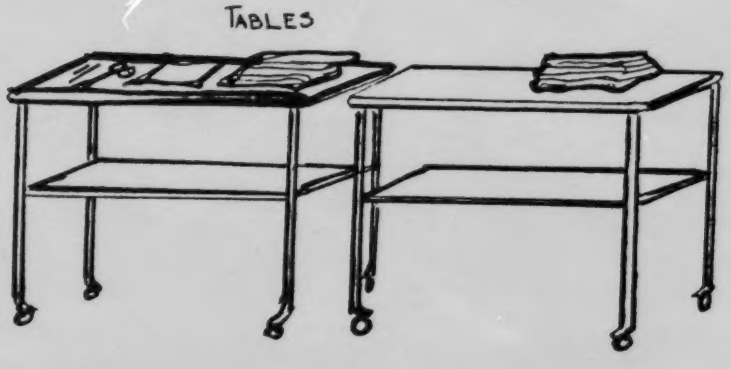


X-ray machine -- above the X-ray table. This takes pictures as your Catheterization progresses.

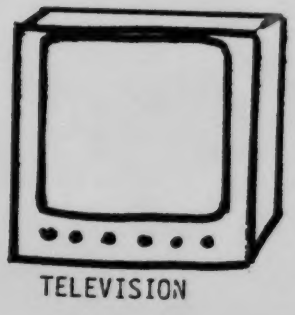
Monitor -- large machine used to record your blood pressure and heart rate.



Several tables -- these hold instruments and equipment to be used during the procedure.



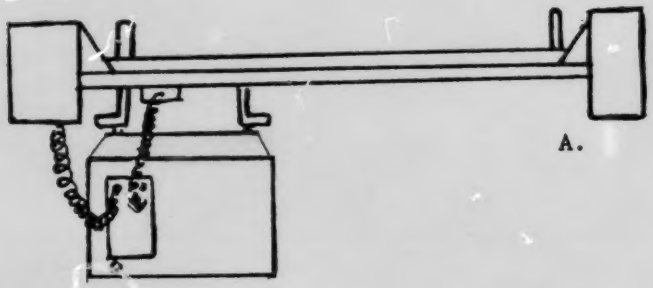
Two T.V. screens -- to show pictures of your heart as the Catheterization progresses.



Practice Question 4

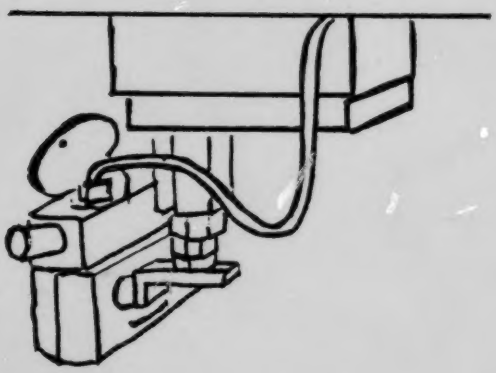
Can you name these 2 pieces of equipment?

A.



A.

B.



B.

When you're ready to check your answers, turn the page.

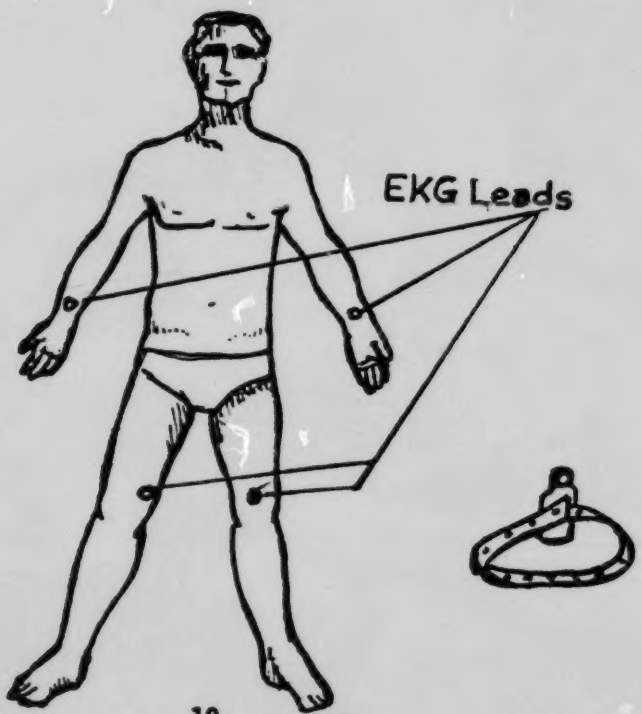
If after A. you wrote X-ray table and after B. you wrote X-ray machine you were absolutely right.

You now know two things you'll expect to see in the Catheterization Room.

* * *

There will be approximately six to eight doctors and technicians in the room during the Catheterization. They will be wearing green gowns, masks and lead aprons.

You will be asked to lie on your back on the X-ray table. EKG (cardiogram) leads will be placed on your arms and legs to monitor your heart rate throughout the procedure. Green towels and sheets will be placed over your chest and legs.



Practice Question 5

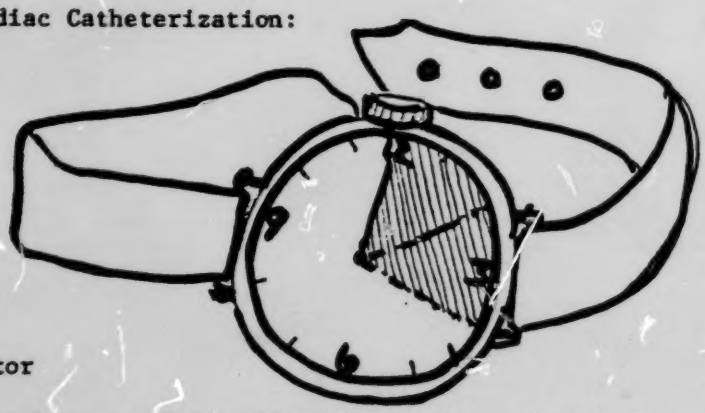
Would you expect to find more than 2 people in the room with you during your Catherization? Check your answer.

A. _____ Yes

B. _____ No

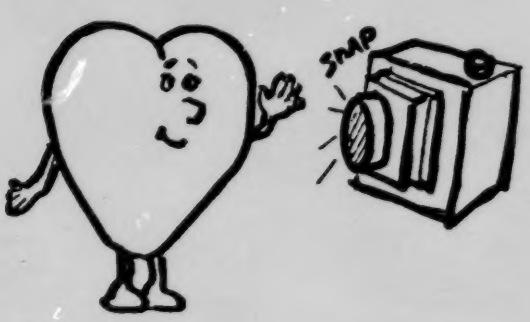
If you checked Yes you are doing great! If you checked No, please review the previous section.

What to expect during your Cardiac Catheterization:



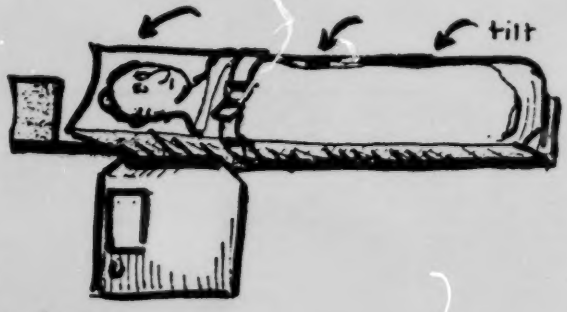
1. It will last 2-4 hours.

2. You will be asked to avoid coughing until a certain point in the test when the doctor will ask you to take a deep breath or cough to aid in the passage of the catheter.



3. A series of X-ray pictures will be taken of the different chambers of your heart throughout the test.
4. The X-ray machine makes a lot of noises as the X-rays are taken.

The X-ray table itself is guided under the X-ray machine to get different views of the heart. Near the end of the test the table will be tilted to the left and right side after a strap is placed over your chest.



6. There will be technical talk and calling out of numbers between the doctors and technicians during the test.

7. The lights in the room will be turned off frequently so the T.V. screens can be seen clearly.

8. Here's one last thing you will experience: In order to visualize certain parts of the heart a special dye may be injected into your heart. The dye makes it possible to see the blood passing through the heart on the T.V. screen. As the dye is injected, you may feel hot and flushed for a brief moment. The doctor will tell you when to expect this. This feeling is normal and passes quickly. There is some discomfort, but no pain, while you undergo the catheterization.

This is an awful lot of information at one time so you may want to review this section before doing the next Practice Questions.

Practice Question 6

A. What type of feeling would you expect when the doctor tells you he is injecting the dye? _____ and _____

B. How long will this feeling last? _____

For A, if you answered hot and flushed or anything similar, you are correct. The answer for b would be it only lasts a few brief moments. Remember, the doctor will tell you when you should expect this feeling.

* * *

AFTER YOUR CARDIAC CATHERIZATION

The heart catheters will be removed after the test and a pressure dressing applied. An I.V. may be started before you go back to your room to give you plenty of fluids.

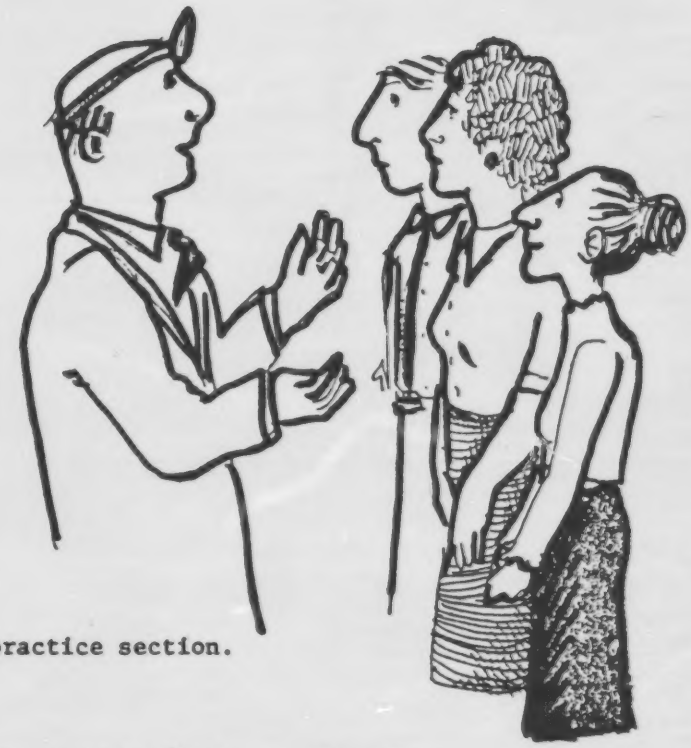
You may be very tired after your test and you will be taken back to your room on a stretcher.

Once in your room expect a nurse to check your blood pressure and pulse frequently for about two hours. This is always done and does not mean anything is wrong. You will be asked to remain in bed for several hours or possibly overnight and not bend your right arm for this time. The doctor or nurse will tell you how long this will be. You may be thirsty after the test and you will be allowed to eat and drink at this time. Feel free to report any discomfort during this time to the nurse.

WHERE IS MY FAMILY?

Your family can wait in the lounge or on the ward during your cardiac catheterization. You will be going to the Catheterization Lab very early in the morning. Usually around 7 A.M. Your family may <u>not</u> come to the Catheterization Laboratory with you.

The doctor will talk to you and your family within a few hours, if not sooner, after your Catheterization about what they found.



This is the last question in the practice section.

Practice Question 7

A. Which of the following would you expect after you return to your room following your Catheterization? More than one answer may be correct.

(1) _____ You will be able to eat and drink.

(2) _____ The nurse will be checking your pulse and blood pressure frequently.

(3) _____ You will remain in bed after the test for several hours.

(4) _____ You can get up and walk around as soon as you're back in your room.

B. Can your family go to the Catheterization Laboratory with you?

Yes _____ No _____

When you are ready to check your answers, turn the page.

A. If you checked:

(1)

(2)

(3)

You're doing great! You're 100% correct. (4) is not correct because you will be asked to remain in bed for several hours or possibly overnight.

B. If you checked No, you were again correct.

* * *

Before going on to the Post-Test...

DO YOU REMEMBER...

...What a Cardiac Cetheterization is?
...How long it will take?
...What you'll need to do before?
...How to help during the Catheterization?
...What to expect after the Catheterization?

IF NOT REVIEW A LITTLE BEFORE YOU PROCEED TO THE POST-TEST QUESTIONS

POST-TEST

Please check the one correct answer to each question.

1. What is a cardiac catheterization?

____a. A test to find out how fast your heart beats.
____b. Putting a catheter into your heart to remain permanently.
____c. A test to determine the amount and exact location of the disease or defect in your heart.

2. Which of these would you expect to be done first?

____a. Getting an injection (shot to relax you).
____b. Go to the catheterization laboratory on a stretcher.
____c. Having X-ray pictures of your heart taken.

3. Before your cardiac catheterization you will be asked to:

____a. Do nothing.
____b. Take several enemas.
____c. Not to eat or drink after midnight the night before your test.

4. Will you be asleep for the test?

____a. Yes
____b. No

5. The cardiac catheterization will require:

____a. A large incision
____b. Passing a catheter (small tube) through your blood vessel into your heart.
____c. Taking your blood pressure every five minutes while you run in place.

6. How long will this test take?

____a. 15 minutes
____b. 2-4 hours
____c. 3 days

7. During the cardiac catheterization you will be asked to help by:

____a. Lying still and trying to avoid coughing until the doctor asks you to cough.
____b. Nothing; you will be asleep.
____c. Standing the whole time.

8. After your catheterization you will be expected to:

____a. Exercise your arms and legs vigorously.
____b. Not eat or drink anything for 8 hours.
____c. Stay in bed and keep your arm straight.

9. Will you expect the nurse to be checking your blood pressure after the test?

____a. Yes
____b. No

ANSWERS TO POST TEST

NOW LET'S SEE HOW WELL YOU DID!

1. (c) A cardiac catheterization is a test to determine the amount and exact location of the disease or defect in your heart.

2. (b) I would expect to get an injection (shot) first to relax me.

3. (c) Before your cardiac catheterization you will be asked not to eat or drink after midnight the night before your test.

4. (b) No, you will not be asleep for the test.

5. (b) The cardiac catheterization requires passing a catheter (small tube) through your blood vessel into your heart.

6. (b) A cardiac catheterization takes 2-4 hours.

7. (a) You will be asked to help during the cardiac catheterization by lying still and trying not to cough until the doctor asks you to cough.

8. (c) After your catheterization, you will be expected to stay in bed and keep your arm straight for 4-6 hours.

9. (a) Yes, I would expect the nurse to check my blood pressure frequently after the test.

If you answered all of these questions correctly or only missed two you did fine! If you missed more than 2 you may wish to review this learning unit.

HEALTH INSTRUCTION EXCHANGE
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A PROJECT OF THE LEAGUE FOR INNOVATION IN THE COMMUNITY COLLEGE

SO, YOU HAVE A PACEMAKER

By

Karen S. Ehrat

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TITLE OF PACKAGE:	So, You Have a Pacemaker
AUTHOR:	Karen S. Ehrat
INSTITUTION:	Tucson Medical Center, Tucson, Arizona
INTENDED STUDENTS:	The patient with an asynchronous (demand) implanted pacemaker
ESTIMATED WORKING TIME:	30 minutes
MATERIALS NEEDED:	Watch or clock with sweep-second hand
REVISED:	July 1, 1977

*IMPORTANT NOTE TO NURSE OR HEALTH EDUCATOR: For the patient to achieve maximum learning from this packet, please turn to page 7 and page 15 and enter the patient's asynchronous (demand) pacemaker rate at the asterisk. Thank you! Don't be surprised when the patient calls you to count his pulse (FOR ONE FULL MINUTE) with him.

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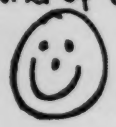
INTRODUCTION

So, you have a pacemaker! Some of my very best friends have pacemakers! for that reason, I thought I would put together a little package for them – just to help them understand how their new pacemakers function ... and of course, to clear up any misunderstandings. 

So, you have a DECISION to make. If you want to be my friend, I will say that this package has been written Especially for You! ... since you're my friend and all...

... OR, if you choose not to be my friend, you can just say that you found this in a cabbage patch.

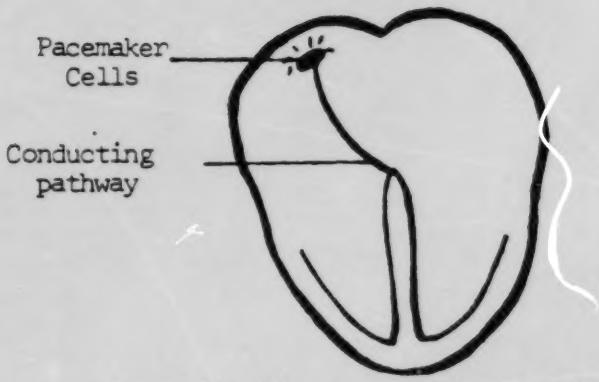
P.S. THERE'S SOMETHING YOU Should Know... NO ONE WILL EVER BELIEVE YOU FOUND THIS IN A CABBAGE PATCH!

Good Luck!
Love

Practice Exercise #1

Doing work requires energy and an energy source! Much like an air hammer or an electric mixer, the heart requires energy and a power source to do its work of contracting or beating.

Because it seemed a bit complicated to create man in the image of an electric outlet, man was given a special group of cells in his heart that would rhythmically discharge an electrical impulse. Someone later called these cells "PACEMAKER CELLS" - they set the pace or rhythm for the normal beating heart. The most important pacemaker cells are found in the upper right quadrant of the heart.



Each time this group of pacemaker cells discharge, a tiny electric impulse is given off. This electrical impulse then travels rapidly down a special conducting pathway which divides into two branches midway through the heart.

Normally, the electric impulse travels down both branches at the same time. When the electric impulse reaches the end of the branches, the heart muscle contracts, moving blood rich in oxygen into the blood stream.

An electrical impulse is discharged from the normal pacemaker cells and travels down the special conducting pathway before each heart beat!

Practice Question 1

The tiny electrical impulse that originates in the pacemaker cells travels across the heart muscle to initiate heart beat. Draw the pathway that the electrical impulse travels on this diagram of the heart.

Feedback Very good! Now you understand how the normal electrical impulse travels from the pacemaker cells, down the heart muscle, to cause heart contraction!

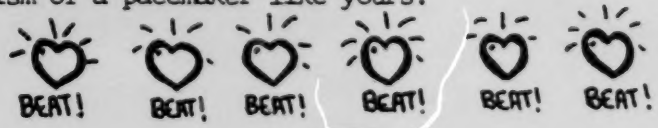
Practice Exercise #2

We have said that normally, special pacemaker cells in the heart produce electrical impulses that cause the heart muscle to contract. If these special pacemaker cells are unhealthy, or if there is a blockage in the conduction pathway, normal heart beat will be impaired.

When this occurs, an artifical pacemaker is implanted into the body to serve as an energy source for heart beat. When the normal pacemaker cells are unable to discharge an electric impulse or when the normal impulses are blocked, the artificial pacemaker will discharge a tiny electric impulse to stimulate heart beat. The artificial pacemaker serves as a back-up! Your own pacemaker cells and the artificial pacemaker work together to keep your heart beating at a rate that is healthy for you.

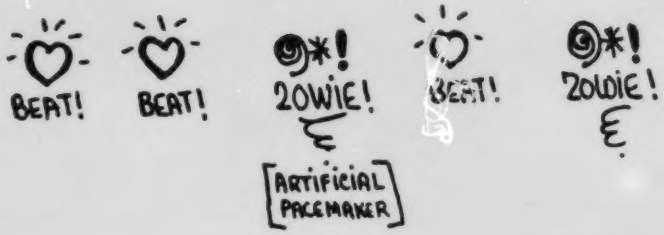
Let me attempt to explain the mechanism of a pacemaker like yours.

Let's say that a physician wishes his patient's heart beat to look like this ...



but because the patient's own pacemaker cells "ain't what they used to be", they aren't always able to discharge an electrical impulse to make the heart beat that fast. So, his heart beat looks like this...

To solve the problem, the patient was given a brand new shiny artificial pacemaker. Artificial pacemakers are smart - they always know what the patient's own heart is up to! We call this "sensing". So when the patient's heart beat slows down, the artificial pacemaker takes over. The patient's heart beat now looks like this. When the patient's heart beat stays at a healthy rate, the artificial pacemaker rests! Real teamwork! The patient's own pacemaker cells and the artificial pacemaker work together to keep his heart beating at the rate the physician feels is best.

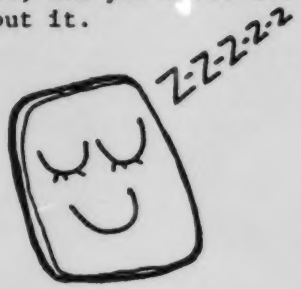


P.S. I forgot to tell you one thing. You will never feel your artificial pacemaker discharge its tiny electrical impulse - it's painless!

Practice Question #2

In your own words, describe how your artificial pacemaker works. Think of what your artificial pacemaker will do if you have a slow heart rate - and think about what it does if your own heart rate is adequate.

Feedback You're doing great! Sometimes it helps to read that section through again.
Your artificial pacemaker serves as a "back-up" for normal pacemaker cells when they are unable to discharge electrical impulses - or when the electrical conducting pathway is blocked.
When your heart rate is slow, your artificial pacemaker will assist your own heart cells, keeping your heart beat at an acceptable rate.
When your own heart beat is adequate, your artificial pacemaker rests!
It does it in your sleep, too, and you never even know it. What teamwork! You don't even need to think about it.



Practice Exercise #3

In order for you to evaluate or check the proper functioning of your artificial pacemaker, it is necessary for you to be able to count your own pulse. First, let's look at HOW TO's! Place the middle and index finger pads of one hand lightly on the inside of the other wrist - on the thumbside of the innerwrist. That sounds confusing, so I drew a picture. Move your fingertips until you feel the bounding pulsation of the radial artery. **That is the feeling of your blood bouncing along in your artery.**

To count your pulse, you must count the number of pulsations you feel with your fingertips in a one-minute time period. If you are unable to find your pulse, do not feel discouraged! It happens to the best of us! Call your nurse for some "on the spot" instruction.

Another set of pulses which can (usually) be located easily are the carotid pulses. Lightly place your fingertips just under the angle of either jaw bone. Move your fingers gently until you feel a bounding pulsation.

The radial and carotid pulses, once found, can easily be counted. Try it! Time your pulse for a full 60 seconds.

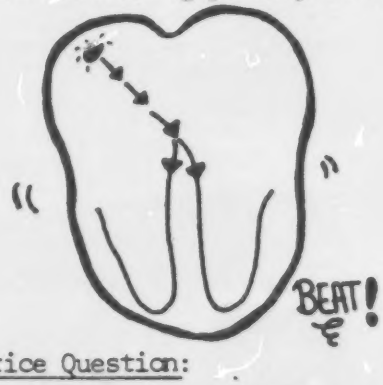
Practice Question #3

Draw a stick figure of a man and label where you would find radial and carotid pulses.

Feedback Very good! I cheated, I had an artist draw my man.

Practice Exercise #4

The healthy heart muscle contracts or beats 60-100 times per minute. This is considered to be the normal range for heart beat. The pacemaker cells located in the upper right quadrant of the heart discharge tiny electrical impulses 60-100 times per minute. Each of these impulses rapidly travels down the special conducting pathway to cause heart muscle contraction.



Each time the heart contracts (60-100 times per minute), a radial and a carotid pulse can be felt.
Neat, huh!

And, to make certain that your heart beats at a normal rate, your artificial pacemaker is set at* _____ beats per minute. That means your pulse rate will never be less than* _____ beats per minute.

Practice Question:

How many times per minute does the healthy heart beat? _____

At what rate is your artificial pacemaker set? _____ beats per minute.

Feedback You're fast becoming a PRO! (That's why I picked you as a friend) If your normal pulse rate begins to slow, your artificial pacemaker will take over to keep your pulse rate in the healthy range (60-100 beats per minute).

Practice Exercise #5

You can determine that your artificial pacemaker is functioning normally by counting and recording your pulse daily. You are responsible for counting your radial or carotid pulse for one full minute once every day. You will know that your pacemaker is working properly because your radial or carotid pulse will never be less than the rate of your artificial pacemaker. Unless you have a fever or are excited, your pulse will rarely be greater than 100 beats per minute. It's best to count your pulse while you are resting. If your pulse rate is slower than your artificial pacemaker rate, or if your pulse rate is over 100, you should notify your physician. Recording your daily pulse rate is important because it allows your physician a means to evaluate your health, the effect of any drugs you might be taking, and the artificial pacemaker function. It is helpful to draw up a chart for recording your daily pulse. Here is an example of what a one-week chart might look like.

DATE	SUNDAY 10/18	MONDAY 10/19	TUESDAY 10/20	WEDNESDAY 10/21	THURSDAY 10/22	FRIDAY 10/23	SATURDAY 10/24
TIME PULSE							

(Establish a habit -- count your pulse at the same time each day)

Any chart will be fine, as long as there is room to record the date, the time and your pulse rate. Some of my friends have found that using a big calendar is the simplest way. Since the date is given on the calendar, they only have to record the time and their pulse rates.

P.S. When you visit your doctor, be sure to take your record with you!

Practice Question #5

A. Design a chart for recording your daily pulse counts.

B. Now, count your pulse for one full minute and record it on your chart.

C. Circle the one most important reason for counting and recording your daily pulse rate.

1. Because the doctor or nurse told me to
2. To be certain my artificial pacemaker is functioning normally. My pulse rate should not be slower than the rate of my artificial pacemaker. My pulse rate should be less than 100 when I'm at rest.
3. To make certain that my pulse is exactly the same rate as the artificial pacemaker rate.

Feedback You are doing well! Any type of chart will be okay - as long as you include the date and leave room to record your daily pulse rate. If you circled statement C2, I'm proud of you. If you circled statement C3, re-read the material one more time!

Practice Exercise #6

You are rapidly becoming very knowledgeable about artificial pacemaker functioning. Previously you learned that you can identify that your artificial pacemaker is functioning normally if:

A. Your radial or carotid pulse rate is not less than the rate of your artificial pacemaker.

B. Your pulse rate is 100 or less when you are at rest (unless you have a fever!)

There are only a few more facts for you to commit to memory! A very slow pulse rate or a very fast pulse rate may cause you to experience unusual feelings. A very slow pulse rate may make you feel very fatigued or tired. Or, you might feel "foggy" or mentally sluggish - perhaps confused. Slow pulse rates may also cause one to be dizzy, feel faint or even black out. So, fatigue, mental sluggishness, confusion, dizziness and fainting may be associated with slow pulse rates. Fast pulse rates may cause you to feel palpitations or flutterings in your chest. Rapid pulses may also tend to make one feel anxious, and maybe even breathless. To review then, very slow or very fast pulse rates may make one feel confused, dizzy, faint, palpitations, anxious or breathless. If you should ever experience any of these feelings, first check your pulse. If your pulse rate is slower than the rate of your artificial pacemaker or faster than 100 when you are at rest, you should notify your physician.

Practice Question #6

Without looking back, name all the unusual feelings or symptoms that you might experience with either a very slow or very fast heart rate.

If you wrote down most of the unusual feelings or symptoms of a very slow or very fast heart rate I've listed below, you're doing very, very well. Your list, of course, doesn't have to be in the same order as mine.

Slow Pulse	Fast Pulse
Fatigue	Palpitations
Tiredness	Flutterings in chest
Dizziness	Anxiousness
Fainting	Breathlessness

Even if you didn't have any trouble writing down the unusual feelings or symptoms, reread this section. It contains a great deal of important information.

When you feel you're ready for a "Self-check Quiz" on the information covered in this package, please turn the page.

SELF-CHECK QUIZ

1. The heart is stimulated to beat by a tiny electrical impulse that travels through the heart muscle. In this diagram of the heart, draw in the pathway that this electrical impulse travels to initiate heart contraction or heart beat.

2. Use the following space to describe how your artificial pacemaker works. It might by helpful to think of what you would share with a friend who is about to get a new, artificial pacemaker. Explain what your artificial pacemaker will do if your own heart beat is slower than its rate.

_____

_____

_____

_____

_____

_____

3. Now that your friend has his new pacemaker, he needs your help in learning how to count his pulse. Using this man, draw in the locations where he could feel his radial and carotid pulses.

4. Fill in the blanks: Usually, the heart beats _____ to _____ times per
5. minute. My pacemaker is set at a rate of _____ beats per minute.

6. **When you are discharged from the hospital, it is important for you to count and record your pulse rate daily. Use the following space to draw a chart for recording your pulse rate. Because there is so little space, make this chart for a one-week period, beginning with today.**

7. Now, count your pulse rate for one full minute. Write your pulse rate in on the chart you have just drawn.

ARE YOU TIRED YET? YOU 'RE ALMOST DONE.
7 down, 3 to go!

8. Circle the one most important reason for counting and recording your daily pulse rate:

   A. So that I can be certain that my pulse is exactly the same rate as my artificial pacemaker rate

   B. To make certain that my pulse is not less than my artificial pacemaker rate, nor greater than 100 beats per minute when I am resting.

   C. To make certain that my pulse is strong

9. A "very slow" or "very rapid" heart beat may cause you to feel unusual. An example would be extreme fatigue or tiredness. Name other unusual feelings you might experience with a "very slow" or "very rapid" heart beat.

_____

_____

_____

_____

10. Now, I need you to be honest. Friends are always honest with each other. Please check (X) the boxes that best describe your feelings about this self-instructional package.

This self-instructional package was:

Clear						Confusing
Enjoyable						Boring
Useful						Useless

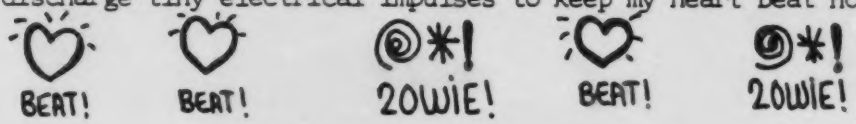
I could summarize my feelings about this self-instructional package in 25 words or less, by saying. . .

You will find answers to your post-test questions on the following pages.

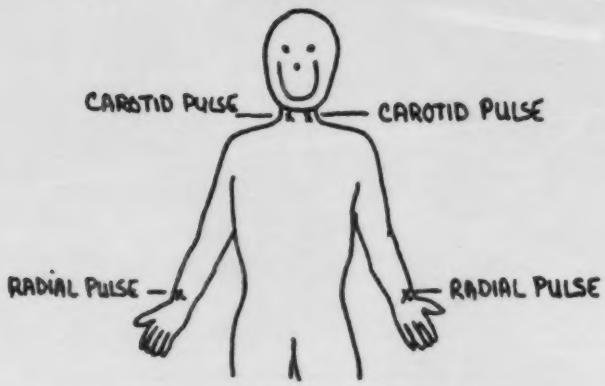
ANSWERS TO SELF-CHECK QUIZ

1.

2. If my heart's own pacemaker cells are unable to discharge electrical impulses - or if there is some blockage in the pathway, my artificial pacemaker takes over, causing my heart to beat. My own pacemaker cells and my artificial pacemaker work <u>together</u> to keep my heart beating at a healthy rate. If my own heart beat slows down, my artificial pacemaker will discharge tiny electrical impulses to keep my heart beat normal.



3.



4. Usually, the heart beats <u>60</u> to <u>100</u> times per minute.
5. My pacemaker is set at a rate of <u>*</u> beats per minute.

6. Any chart will be okay - as long as you include a space for the date, time and leave room to record your daily pulse.

DATE TIME									
PULSE									

7. I meant to be with you today, so that I could check to see if you can accurately count your pulse for one minute (I'm busy hiding these packets in cabbage patches!! !) So, call your nurse. Don't be <u>BASHFUL</u>, Turn on your light. When your nurse comes - ask her to count your pulse <u>with you</u> - FOR ONE FULL MINUTE! Now, turn on your light.

Did you call your nurse yet. If not, do it!!! before I count to ten . . .

1...2...3...4...5...6...7...8...9...

That's better!
Remember, the both of you must count together for

ONE FULL MINUTE!
(None of my other friends minded calling the nurse)

8. The one most important reason for counting and recording your daily pulse rate is:

   B. To make certain that my pulse is not less than my artificial pacemaker rate, nor greater than 100 per minute when I am resting.

9. Besides fatigue or tiredness, other unusual feeling's might be:

Confusion	Palpitations or flutterings in my chest
Dizziness	Anxiousness
Fainting	Breathlessness

Thank you! This has been fun!
P.S. I'm glad you're my friend.

ANSWER SHEET FOR PRACTICE QUIZ

(1)

(2)

ANSWER SHEET FOR PRACTICE QUIZ (Cont.)

(3)

(4) A. _____

B. _____

(5) A.

B. Count your pulse for one full minute and record it on your chart.

C. 1.

2.

3.

ANSWER SHEET FOR PRACTICE QUIZ (Cont.)

(6) _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

ANSWER SHEET FOR SELF-CHECK QUIZ

1.

2.

3.

ANSWER SHEET FOR SELF-CHECK QUIZ (Cont.)

4. ...beats _____ to _____times per minute.

5. ...at a rate of _____beats per minute.

6.

7. Did you count your pulse rate? Did you write your pulse rate on the above chart?

8. A.

   B.

   C.

9. _____

   _____

   _____

   _____

10.

Clear	Confusing
Enjoyable	Boring
Useful	Useless

_____

_____

_____

_____

_____

HEALTH INSTRUCTION EXCHANGE
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A PROJECT OF THE LEAGUE FOR INNOVATION IN THE COMMUNITY COLLEGE

PATIENT MANAGEMENT OF DIGOXIN

by

Nelda A. Samarel, R.N.

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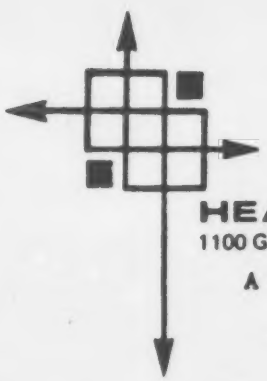
TITLE:	Patient Management of Digoxin
AUTHOR:	Nelda Samarel
INSTITUTION:	Riverview (N.J.) Hospital
INTENDED STUDENTS:	Patients taking Digoxin
ESTIMATED WORKING TIME:	40 minutes
MATERIALS NEEDED:	Watch with second hand

FIELD TEST COPY



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INTRODUCTION

This learning package is for patients who will be taking Digoxin at home.

If your doctor has prescribed this medication for you, there are several important things you will want to know.

What is Digoxin?

Why do I need to take Digoxin?

What do I have to know about Digoxin while I am taking it?

What do I do when I have a question about taking my Digoxin?

When you have completed this learning package, you will have the answers to these questions.

PRACTICE EXERCISE # 1

Input

The heart is like a pump - pumping necessary nutrients and oxygen, by way of the blood, to all parts of the body.

Sometimes, this pump is not working as efficiently as is necessary. This means that an insufficient amount (not enough) of nutrients and oxygen are reaching body tissues.

Body tissues need the nutrients and oxygen that are carried by the blood in order to maintain function. Therefore, a medication -- such as Digoxin -- may be prescribed to increase the heart's efficiency.

PRACTICE EXERCISE # 1 (con't)

Practice Question:

It may be necessary to take Digoxin when:

A. the heart is pumping too much blood to the body

B. the heart is not pumping efficiently enough to send enough blood to the body

C. the heart stops beating

D. you have chest pain

Feedback

B. The heart is not pumping efficiently enough to send enough blood to the body.

If you have answered this practice question correctly, you have completed the first objective in this package and may go on to the next page. If not, please re-read the previous page again.

PRACTICE EXERCISE # 2

Input

Digoxin is taken because it helps strengthen the heart's action. It increases the ability of the heart to send blood to all parts of the body. It does this by strengthening each beat of the heart -- thereby sending more blood with each heartbeat.

Practice Question

Digoxin affects the heart by:

a) making the heart beat faster
b) relieving pain
c) strengthening the pump action of the heart
d) Digoxin does not affect the heart

Feedback

c) Strengthening the pump action of the heart.

Do go on to the next page if you have selected the correct answer. If you have not selected the correct answer, please re-read this page again.

PRACTICE EXERCISE # 3

Input

As with any medication, it is very important to take Digoxin exactly as the doctor orders it. Never take any more or any less than prescribed.

Digoxin must be taken at the same time every day. Before you decide when you will take your Digoxin, stop and think about your daily routine. If you have your breakfast at about the same time every day, then breakfast time might be a good time for you to take your Digoxin.

Whatever time you decide upon, remember — take your Digoxin at the same time every day.

Practice Questions

1. The correct amount of Digoxin to take:

   a) depends on several things
   b) is always prescribed by the doctor
   c) is one pill
   d) is two pills

2. The time to take Digoxin:

   a) is the same every day
   b) is with breakfast
   c) is before going to sleep
   d) doesn't really matter

Feedback

1. b) is always prescribed by the doctor

2. a) is the same every day

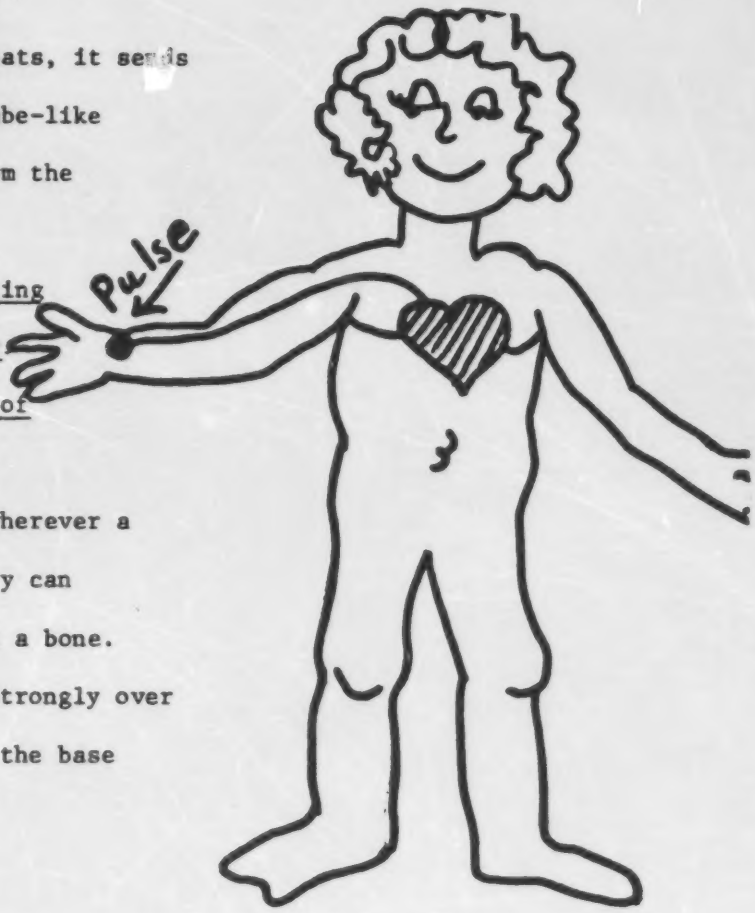
If you were unable to answer these questions, please re-read the page. If you selected the correct answers, you have completed the first 3 objectives in this package. Please go on ...

PRACTICE EXERCISE # 4

Input

Just before you are ready to take your daily Digoxin, you must count your pulse. What is a "pulse?"

Every time the heart beats, it sends blood through the arteries (small tube-like structures that carry blood away from the heart.)



The pulse is the resulting throb of the heartbeat in the artery. The pulse is the contraction (beat) of the heart felt in the artery.

The pulse can be felt wherever a superficial (beneath the skin) artery can be held against firm tissue, such as a bone.

The pulse can be felt strongly over the "radial" artery in the wrist at the base of the thumb.

Practice Question :

Pulse is:

a) the amount of blood going through the heart
b) the amount of blood leaving the heart
c) the strength of the heartbeat
d) the resultant throb of the heartbeat in the artery

Feedback

d) the resultant throb of the heartbeat in the artery.

If you did not choose d, please re-read this page again. If d was chosen, please go on.....

PRACTICE EXERCISE # 5

Input

To count your own pulse, you will need a watch with a second hand. Place it in front of you so that you can easily read it. In a comfortable sitting position, place one hand in your lap with the palm facing up. Place the middle three fingertips of your other hand over the "radial" artery -- on your wrist about 1/2 inch to 1 1/2 inches below the base of your thumb. Apply slight pressure.

The throb you will feel is the blood flowing through the artery with each heartbeat.

Remember - 3 fingertips over the radial artery - slight pressure.

Once you feel your pulse, look at your watch and count for a full 60 seconds (one minute).

Practice Question: The pulse is taken by placing:

a) the middle 3 fingertips of one hand over the radial artery of the other hand; apply slight pressure; count number of beats for 60 seconds.

b) the middle 3 fingertips of one hand over the radial artery of the other hand; apply slight pressure; count number of beats for 30 seconds.

c) the middle 3 fingertips of one hand over the radial artery of the other hand; count number of beats for 60 seconds.

d) One fingertip of one hand over the radial artery of the other hand; apply slight pressure; count number of beats for 60 seconds.

PRACTICE EXERCISE # 5 (con't)

Feedback

a) the middle 3 fingertips of one hand over the radial artery of the other hand; apply slight pressure; count number of beats for 60 seconds.

If you were unable to answer correctly, you need to re-read the previous page. If you have chosen a, you are ready to practice counting your pulse. Please go on ....

PRACTICE EXERCISE # 6

Input

Now, let's practice. Once you have your watch and are seated comfortably, count your own pulse.

Pulse_____

Practice several times until you feel comfortable with it.

Pulse rate is the number of throbs counted in 60 seconds. Pulse rate changes from time to time. A temporary increase in pulse rate may be due to fear, anger, physical exercise, or anxiety. If your pulse seems fast, stop and relax for a few minutes and then try again.

Practice Question

1. Pulse rate:

   a) may increase with exercise
   b) may increase with fear
   c) may increase with anger
   d) all of the above
   e) none of the above

2. Count your pulse three times:

   _____

   _____

   _____

Feedback

1. d) all of the above.

If you feel comfortable about counting your own pulse, please go on. If you don't feel comfortable yet, try practicing a few more times.

PRACTICE EXERCISE # 6 (con't)

Feedback (con't)

2. Were your results all within 5 beats of each other? Did you"lose" your pulse? Was it difficult to find it again? Most people have the most trouble right here.

If you feel comfortable about counting your own pulse, you're doing great! If you don't feel comfortable yet, don't worry. You will. Try practicing a few more times.

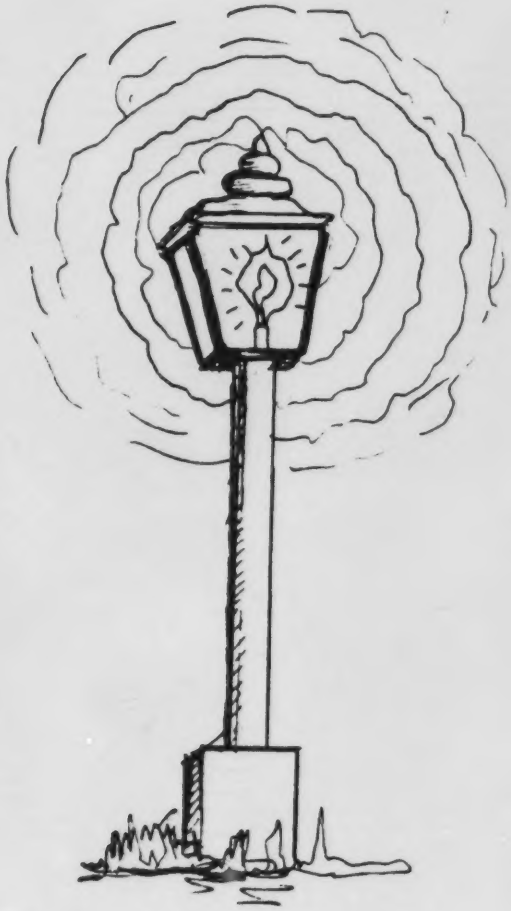
PRACTICE EXERCISE # 7

Input

As with all medications, there are side effects that may be experienced when taking Digoxin.

Some side effects that may be experienced include:

nausea, vomiting or diarrhea for more than 24 hours.



change in vision; such as seeing rainbows, yellow hazes, or halos around bright lights.

pulse rate below 60 or above 120 (remember that pulse may increase with exercise, anger, fear. This is normal.)

PRACTICE EXERCISE # 7 (con't)

When taking any medication, including Digoxin, it is important to be aware of the side effects.

REMEMBER:

nausea, vomiting, diarrhea

change in vision

pulse below 60 or above 120

Practice Question

Some possible side effects of Digoxin are:

a) nausea, vomiting, diarrhea, change in pulse
b) nausea, vomiting, constipation
c) change in vision, constipation
d) change in vision, sleepiness, pain

Feedback

a) nausea, vomiting, diarrhea, change in pulse.

If you did not know these side effects, please re-read the previous pages. If you chose (a), you have already completed objectives 1 through 5. Please go on.....

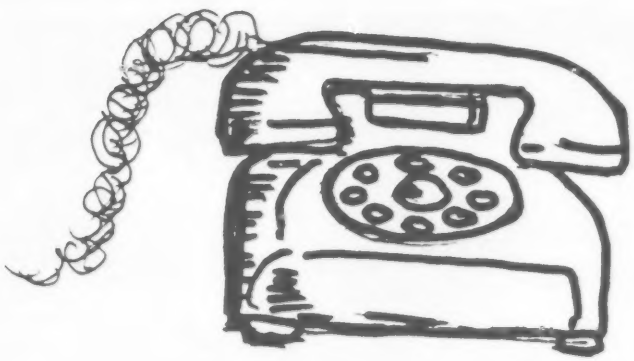
PRACTICE EXERCISE # 8

Input

It is possible that you may, at some time, experience one or more of these side effects. This may mean that your Digoxin dosage should be changed. But, of course, YOUR DOCTOR IS THE ONLY ONE TO DECIDE THAT.

So-o-o-o-o

If you have any of the symptoms we have been talking about, report them to your doctor immediately - before taking your next Digoxin.



Remember - call your doctor as soon as you experience any of these symptoms. He will tell you when to take your next Digoxin and how much to take.

Practice Questions

Given these situations, what would you do?

a) It is 9 A.M. and time to take my daily Digoxin. I have been slightly nauseous since yesterday morning. I had no vomiting or diarrhea. I take my pulse and see that the rate is 56. What do I do?

PRACTICE EXERCISE # 8 (con't)

Practice Questions (con't)

b) It is 9 A.M. and time to take my daily Digoxin. I have just gotten my watch from my bedroom upstairs. I take my pulse and see that the rate is 124. What do I do?

Feedback

a) Before taking your Digoxin, call the doctor to report these symptoms. Do this right away.

b) You have just climbed a flight of stairs. Such physical exercise can temporarily increase your pulse. This is normal. Wait 5 - 10 minutes while relaxing; then take your pulse again. If it is below 120, take your Digoxin.

If you knew what to do in these situations, you have completed all the objectives in this package. Please continue.....

PRACTICE EXERCISE # 9

Input

To Review:

Digoxin is taken because it helps strengthen the heart's action.

Remember the following when you take Digoxin:

1. Take your Digoxin at the same time every day after counting your pulse.

2. Do not take any more than your doctor has told you to take.

3. Call your doctor if you have:

   nausea, vomiting or diarrhea for more than a day ;

   changes in vision such as seeing rainbows or yellow haze around bright lights;

   change in pulse rate - below 60 or above 120.

Practice Questions:

1. It is necessary for you to take Digoxin:

   a) to strengthen the beat of the heart
   b) to weaken the beat of the heart
   c) because your heart needs a rest
   d) to relieve chest pain

2. List 4 of the things you need to know in order to safely take Digoxin.

   _____

   _____

   _____

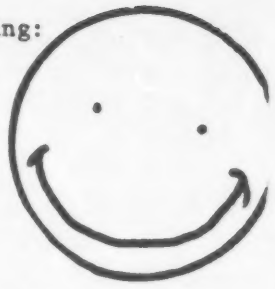
   _____

PRACTICE EXERCISE # 9 (con't)

Feedback

1. a) to strengthen the beat of the heart.

2. Your answer should include at least 4 of the following:



Why you take Digoxin.
Correct dosage to take.
Proper time to take Digoxin.
How to count your pulse.
Side effects of Digoxin.
When to call your doctor.

If you knew the answers to these questions, you are now able to:

1. Describe the purpose of Digoxin administration.
2. Describe the effect of Digoxin on the heart.
3. Describe the correct dosage and proper time to take Digoxin.
4. Count your own pulse.
5. Select possible side effects of Digoxin.
6. Describe what to do when you notice any of the side effects.

As a review, and to test your new knowledge, please take the short quiz on the next page. Check your answers against the answer sheet on the following page.

POST-TEST

1. Why is it necessary to take Digoxin?

2. What is the effect of Digoxin on the heart?

3. How much Digoxin should you take?

4. When should you take your Digoxin?

5. Count your pulse 3 times in the next five minutes. Write your results.

_____ _____ _____

6. From the list below, select the possible side effects of Digoxin:

nausea	drowsiness	headache
vomiting	seeing "halos" around lights	chest pain
diarrhea	pulse of 84	hunger
constipation	pulse of 52	thirst

7. What should you do if you have any of these side effects?

8. Do <u>you</u> feel that you know how to take your Digoxin safely and accurately?

9. List areas of Digoxin therapy in which you are unsure or need to know more.

10. List any questions you might have that have not been answered in this package.

POST- TEST ANSWERS

1. The heart is not pumping blood as effectively as necessary /or/ the heart is not beating strongly enough to send needed blood to all parts of the body.

2. Digoxin strengthens the pump action of the heart /or/ Digoxin strengthens the beat of the heart.

3. Exactly that prescribed by the doctor - no more; no less.

4. At the same time every day, after counting your pulse.

5. Your 3 answers should be within 5 beats of each other.

6. You should have selected:

nausea	diarrhea	pulse of 52
vomiting	seeing "halos" around lights.	

7. Before taking Digoxin, call your doctor.

8.)
9.) No correct answers.
10)

If you missed any of the first 7 questions, go back to the section of the learning package that will help you to learn the answer.

If you scored all 7 correctly, give yourself a Happy Face.

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